

A study of Glossematics

B. SIERTSEMA



A STUDY OF GLOSSEMATICS
CRITICAL SURVEY OF ITS FUNDAMENTAL CONCEPTS

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BY

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PREFACE

This book owes its existence to the encouragement and help of many others. In the first place I mention Prof. Dr. A. J. B. N. Reichling, who was my supervisor at Amsterdam University and who from the beginning helped me on, through his most stimulating teaching and above all through his encouragement, his friendly advice and his sincere interest. The readiness with which he was always prepared to spend hours and hours of his valuable time on the discussion of the many problems with which the study of Glossematics confronts one, has often inspired me with wonder and deep gratitude. It is hardly possible to do justice in a preface to a supervisor to whom one owes so much, and from whose keen insight one has learned so much. One can only feel profoundly thankful for having been brought up in the linguistic atmosphere which Prof. Reichling creates about him, an atmosphere characterized by a persistent desire for an empirical approach to the facts of language, which desire he knows how to instill into his pupils.

It is with some hesitation that I proceed to thanking the Danish scholars to whom I owe so much. The hesitation is due to an awareness that probably this work bears no proportion to all the trouble they took in my behalf.

Above all I am extremely grateful to Prof. Dr. Louis Hjelmslev of Copenhagen, for the patience he showed in the long hours of discussion which he very kindly granted me, and for his willingness to answer my endless and often cumbersome questions. It certainly is not owing to a lack of patient explaining on his side that the present study of Glossematics still excels in its great number of question-marks: in advance I tender him my sincere apologies for the cases where I may have misunderstood him or may simply not have been able to follow him. If this thesis should do no more than induce Prof. Hjelmslev to writing an exposition of glossematic theory some day which could be

understood in all its details also by those linguists who are no specialists in the field, I should consider it an ample reward for my own trouble, for I am convinced that glossematic theory has most valuable things to teach to present-day linguistics.

I wish to express my sincere gratitude to Miss Eli Fischer-Jørgensen, Lektor in Copenhagen University, for helping me wherever and whenever she could. At the very beginning it was she who gave me a complete bibliography of glossematic writings up to that time. Later on I greatly benefited from the correspondence and the pleasant and enlightening discussions which I was privileged to have with her. Her kindness in giving me her stencilled lecture on Glossematics, held in Washington in 1951, and in lending me her Reports of the meetings of the glossematic committee in the Copenhagen Linguistic Circle, has done much to give me a better understanding of the theory. Her own attitude towards glossematics, which appears also in her lucidly written publications, has been a great help to me in defining my own standpoint.

I gladly acknowledge the generosity of Prof. Dr. H. J. Uldall in lending me a proof of his *Outline of Glossematics* before its publication. Several letters resulted from the reading of it, which he always found time to answer, whether from Scotland or Nigeria; this stimulating correspondence has also clarified some intricate problems to me.

I do hope I shall not have fallen too far behind the severe self-criticism and methodical way of proceeding of Prof. Dr. P. N. U. Harting of Amsterdam University, who directed my studies of the English language, and to whom I remain thankful for his ever ready helpfulness and advice.

As regards the final preparation of the book I express my sincere thanks to Mrs. A. M. de Bruin-Cousins, M. A., for the trouble she took to correct my English and the wording of this study.

Finally I wish to thank Miss C. M. Felderhof and Mrs. M. G. Siertsema-Egberts for their very kind help in correcting the proofs and compiling the bibliography.

Haarlem, 6 December 1954.

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INTRODUCTION

I. GLOSSEMATICS AND DE SAUSSURE

Glossematics is a modern linguistic theory which, to a greater degree than any other, is influenced by the *Cours de Linguistique Générale* of the Genevan professor of linguistics Ferdinand de Saussure (1857–1913).

It would therefore be possible to sketch the glossematic system against the background of de Saussure's ideas. This would be one way to introduce glossematics to the scholar who, puzzled by the entirely new terminology and the equally new linguistic way of thinking developed in glossematics, is searching for a solution to the problems with which glossematics confronts him. But this method would have the drawback of entailing a more roundabout treatment than a direct approach to the ideas of glossematics would require. We shall therefore confine ourselves to giving a short exposition of some prominent features of de Saussure's theory, which from the beginning have put a certain stamp on glossematics.

In the shape in which it originally appeared in linguistics, glossematics was a development of the phonological conceptions of Louis Hjelmslev, the Danish professor of comparative linguistics in Copenhagen University. He based this development on de Saussure's conception of the phonemes as "des entités oppositives, relatives et négatives" (*Cours*, p. 164c). That is to say: the phoneme is not a phonetic unit.

There is nothing extraordinary in this conception except the qualification of a phoneme as a "negative" entity. And it is precisely this negation that is at the bottom of glossematics proper.

De Saussure introduces the term 'phoneme' almost imperceptibly, to him there is nothing uncommon in it.

When reading his *Mémoire sur le système primitif des voyelles* (1878), one suddenly realizes that the author has been using

the term *phonème* all the time. He has not defined it. He just uses it ¹⁾. According to Hjelmslev, Saussure shows here that the Indo-European sound system can be simplified by analyzing the Indo-European long vowels into simple vowels + a certain unit A. This A designates "a unit which is not a sound, but which may be represented or manifested by a sound", says Hjelmslev ²⁾.

Glossematicians say that here (1878) we find the origin of de Saussure's later theory of language as a form independent of sound or any other "substance of expression". Glossematicians reproach the Prague school for having "appropriated" de Saussure's ideas for their own theory, according to which the phoneme is also an abstraction, but, says Hjelmslev, "definitely a *phonetic* one, and radically different from what, to my mind, Saussure's phoneme must have been" (*Struct. Anal.* p. 73).

Hjelmslev does not state the place where de Saussure says that this A is not a sound; I have not been able to find it in the *Mémoire*. De Saussure's further observations seem rather to point to a phonetic conception of A³⁾. For instance, when on p. 49 he says that A "n'est *parent* ni de l'*e* (*a*₁) ni de l'*o* (*a*₂)", and on p. 61, where he states: "Ce phonème qui dans le groupe du sud ne diffère de A *bref* que par la *quantité*, chez elles (les langues du nord, BS) en général se distingue encore par la *teinte*" (italics mine). As to de Saussure's *phoneme*, the quotations will suffice to show that the Prague school is right in its conception of it as a "*phonetic* abstraction".

If there should be any point in discussing de Saussure's first use of the word "phonème" in 1878, it would be more reasonable, I should say, to start at the beginning. Since he did not give a definition of the term but simply introduced it as a name coming naturally to him to denote this new unit A which he had found, I believe we should not begin by asking: what does he mean by that *term*, but put our question the other way round: what can have induced de Saussure, without any reasoning about it, to

¹⁾ First use of the term "*phonème*" by de Saussure: "... la ressemblance de *Ar* avec les phonèmes sortis du *r*..." (p. 3) "... (Brugmann) trouve dans gr. lat. sl. *o* = lit. got. *a* = skr. *ā* (du moins dans les syllabes ouvertes) un phonème plus fort qu'il appelle *a*₂..." (p. 6). "...deux phonèmes fondamentalement distincts...: *a*, voyelle simple, opposée à l'*e*; et *o*, voyelle renforcée..." (p. 7. *Recueil des publications scientifiques de Ferdinand de Saussure*, 1922).

²⁾ L. Hjelmslev, *Structural Analysis of Language*, Studia Linguistica I 1947, p. 72.

³⁾ Professor Hellinga of Amsterdam University called my attention to this.

indicate this unknown unit A by the name "*phonème*", which arouses such strong associations with φωνή, *voice*?

Whatever may be the answer to this question, there is no doubt that in the *Cours de Linguistique Générale* (3rd edition 1949) the Genevan linguist does hold that language and the phoneme are independent of sound or of any other "substance of expression" (writing, gestures etc.). The word *independent* used in this connection has often been taken in a far more absolute sense than the author can have intended and attacks ¹⁾ as well as defenses ²⁾ of de Saussure have been built upon this mistaken notion. Even a justifiable defense, as Frei's is ³⁾, presents such pronouncements as: "En affirmant que dans la langue il n'y a que des différences, il a voulu dire que dans le phénomène langue *il n'y a pas d'objet substantiel*" (p. 10). "Le raisonnement de Saussure est en réalité le suivant: La langue n'a rien de positif, *c'est à dire aucune qualité substantielle*, dans ses éléments; le seul fait qu'on pourrait appeler positif chez elle, c'est la combinaison du signifiant et du signifié" (p. 14, italics mine).

For Hjelmslev the problem is solved. After stating that the phoneme is not even a *phonetic* abstraction he formulates the whole problem in these words: "Linguistics describes the relational pattern of language without knowing what the relata are but only by means of describing the relations between their parts and parts of their parts" ⁴⁾.

Nevertheless this view is in contradiction with the example given by de Saussure on pp. 151/152 of the *Cours*:

"Le mécanisme linguistique roule tout entier sur des identités et des différences, celles-ci n'étant que la contrepartie de celles-là. Le problème des identités se retrouve donc partout; mais d'autre part, il se confond en partie avec celui des entités et des unités, dont il n'est qu'une complication, d'ailleurs féconde. Ce caractère ressort bien de la comparaison avec quelques faits pris en dehors du langage. Ainsi nous parlons d'identité à

¹⁾ E.g. E. Buyssens, *Mise au point de quelques notions fondamentales de la phonologie*, Cahiers Ferdinand de Saussure 8 (1949), p. 37-60.

²⁾ E.g. Louis Hjelmslev, *Struct. Anal.*, p. 69 ff.

³⁾ Henri Frei, *Saussure contre Saussure?*, Cahiers Ferdinand de Saussure 9, 1950, p. 7-29.

⁴⁾ L. Hjelmslev, *Struct. Anal.*, p. 75.

propos de deux express "Genève-Paris 8 h. 45 du soir" qui partent à vingt-quatre heures d'intervalle. A nos yeux, c'est le même express, et pourtant probablement locomotive, wagons, personnel, tout est différent. Ou bien si une rue est démolie, puis rebâtie, nous disons que c'est la même rue, alors que matériellement il ne subsiste peut-être rien de l'ancienne. Pourquoi peut-on reconstruire une rue de fond en comble sans qu'elle cesse d'être la même? Parce que *l'entité qu'elle constitue n'est pas purement matérielle; elle est fondée sur certaines conditions auxquelles sa matière occasionnelle est étrangère*, par exemple sa situation relativement aux autres; pareillement, ce qui fait l'express, c'est l'heure de son départ, son itinéraire et en général toutes les circonstances qui le distinguent des autres express. Toutes les fois que les mêmes conditions sont réalisées, on obtient les mêmes entités. *Et pourtant celles-ci ne sont pas abstraites, puisqu'une rue ou un express ne se conçoivent pas en dehors d'une réalisation matérielle*" (italics mine).

If linguistics did not know "what the relata are", its description of the relational pattern in a linguistic sense would become utterly meaningless. Suppose that we have the time-table: 9.03-9.20, 9.24-10.12, 10.14-10.30, 11.-12.05, 12.06-13.—. How are we to know whether this is the time-table of a train, the notation of the periods during which a certain process was observed in a physics laboratory, or the times that a certain person had to be present at the telephone in an office?

Some trends in modern linguistics tend to neglect this difference and theoretically reduce linguistics to this kind of notations and the manipulations, *logical* and/or *mathematical*, which can be performed on the above table ¹⁾. Fortunately, in practice on most pages of these linguistic treatises some concessions are made to ordinary indications such as: "Time-table of the Netherlands Railways", so that the operations remain linguistic ones too.

As a matter of fact the most objective study on de Saussure's thought, Rulon S. Wells' beautifully articulated article: *De*

¹⁾ The definition of the 'system' as: "what the analyst does with the data he gathers through observation of behavior" is rightly criticised by Hockett: "We do not allow the analyst simply to play mathematical games with his data. We require him to produce systematization which *in an operational sense* matches the habits which we ascribe to the speaker: just as the speaker can produce any number of new utterances from essentially the same set of underlying habits, so the analyst's description must be capable of producing any number of new utterances, each capable of passing the test of casual acceptance by a native speaker" (*Review Recherches Structurales*, IJAL 18, 1952, p. 98. See further p. 35.

Saussure's *System of Linguistics*¹⁾, does not reach a definite conclusion as to what de Saussure meant exactly with his qualification of the "negative" character of the phoneme. He quotes i.a. two passages of p. 164 of the *Cours*:

"1) (1e) signifiant linguistique n'est aucunement phonique, il est incorporel, constitué, non par sa substance matérielle, mais uniquement par les différences qui séparent son image acoustique de toutes les autres (164b; c.f. 163a-b).

2) Ce principe est si essentiel qu'il s'applique à tous les éléments matériels de la langue, y compris les phonèmes Ce qui les caractérise, ce n'est pas, comme on pourrait le croire, leur qualité propre et positive, mais simplement le fait qu'ils ne se confondent pas entre eux. Les phonèmes sont avant tout des entités oppositives, relatives et négatives (164c)", concluding: "It is not clear, even from the larger context of the whole *Cours*, whether 2) is meant simply as a restatement of 1) (a rather careless one, if so), or whether it is intended to say something different about phonemes than has been said about signifiants" (p. 13).

In 1951 Wells is more positive on the point of de Saussure's conception: he thinks it "equivocal". Dealing with the difference between the glossematic and the phonological view regarding the relevance of substance: "It is amusing that both Jakobson (*Acta Linguistica* 1.125 (1939) and Hjelmslev (cf. Ege's paper) claim to be following in the footsteps of Saussure. But both are right; Saussure's conception of distinctiveness is equivocal Jakobson has developed one interpretation of it, Hjelmslev the other. And perhaps *the two conceptions are complementary. Somewhere along the line we will wish to connect form with substance*" (R. S. Wells, *Review of "Recherches Structurales 1949"*, *Language* Vol. 27 no. 4, October-December 1951, p. 566 (italics mine). Wells sees the solution in Bloomfield's levels conception).

Basing the following on Prof. Reichling's University Lectures on de Saussure (Amsterdam, 1951/52), I would venture an explication which, when it is based on a sound philology, would to my mind clarify the whole problem.

Speaking about the concept of "valeur" as it is developed in de Saussure's example of the game of chess, Reichling says that there

¹⁾ Word, III, 1-2, 1947, p. 13.

is a deficiency in de Saussure's famous comparison on pp. 153/54: "Supposons qu'au cours d'une partie cette pièce (un cavalier) vienne à être détruite ou égarée: peut-on la remplacer par une autre équivalente? Certainement: non seulement un autre cavalier, mais même une figure dépourvue de toute ressemblance avec celle-ci sera déclarée identique, pourvue qu'on lui attribue la même valeur".

"It is true", says Reichling, "that we can take 'une figure dépourvue de toute ressemblance avec celle-ci (un cavalier)', with this absolutely necessary restriction, *that the new counter must not have the shape of any of the other counters in the game*". In other words: with the one restriction as to the shape of any of the other counters used in the game in question, the whole universe of shapes remains open for the counter to be substituted; and to that extent only is its value a negative one: it must be something the others are not. This is exactly what is said by de Saussure on p. 162a: "Quand on dit qu'elles correspondent à des concepts, on sous-entend que ceux-ci sont purement différentiels, définis non pas positivement par leur contenu, mais négativement par leurs rapports avec les autres termes du système. Leur plus exacte caractéristique est *d'être ce que les autres ne sont pas*". (Italics mine). This is the only consistent interpretation of p. 164c: "Or ce qui les caractérise, ce n'est pas, comme on pourrait le croire, leur qualité propre et positive, mais simplement le fait qu'ils ne se confondent pas entre eux".

What is said here by Reichling concerning de Saussure's notion of "valeur" directly applies to what de Saussure says on the same page concerning "tous les éléments matériels du langage, y compris les phonèmes": when he uses this word "negative" referring to all these elements de Saussure only means the fact which he puts so much more felicitously on p. 162: their most characteristic feature is that they are what the others are not.

Only this sense of the word "negative" in this place prevents it from being a contradiction of what precedes as well as of what is said in all the rest of de Saussure's *Cours*.

Yet, there is one problem left: de Saussure's theory cumulates in the famous words: "La langue est une forme et non une substance" (p. 169).

It is worth while ascertaining what can be meant by "forme" and by "substance". Frei rightly remarks that the *term* "substance" would perhaps not have been chosen by de Saussure himself ¹⁾, but it is a fact that de Saussure without any hesitation denies that what he means by "substance" should *of itself* be a linguistic entity. He says this of sound: "D'ailleurs il est impossible que le son, élément matériel, appartienne par lui-même à la langue. Il n'est pour elle qu'une chose secondaire, une matière qu'elle met en oeuvre" (164b). He says the same of thought: "Qu'on prenne le signifié ou le signifiant, la langue ne comporte *ni des idées ni des sons* qui préexisteraient au système linguistique mais seulement des différences conceptuelles de ce système" (p. 166b, cf. p. 162).

"Substance", consequently, according to de Saussure is all sound produced by the vocal organs in as far as it is not subsumed by a speaker and hearer as part of their system of speech sounds, and every "concept" in as far as it is not "moulded" into the system of content of the language the speaker and hearer make use of.

As regards "forme" de Saussure is far less distinct in his opinion. He uses "forme" everywhere in his book in the traditional sense of "linguistic form", i.e., a linguistic expression that has, that conveys, that is united with, a "meaning". But it is clear that this conception of "forme" is not the one which is meant in the statement: "la langue est une forme et non une substance". In view of the whole of de Saussure's theory, "forme" can in this context only be interpreted as "différences conceptuelles et . . . différences phoniques issues (du) système" (p. 166b).

Leaving aside de Saussure's absolutely convincing statement that the entities of the "mécanisme linguistique . . . ne se conçoivent pas en dehors d'une réalisation matérielle" (p. 151/52, and p. 4 of the present), Hjelmslev considers linguistics as a science which has nothing to do with the "réalisation matérielle" of languages, the study of which he relegates to other sciences.

Yet this requirement for the shape of the counter, viz. that it must be different from the shapes of all the other counters, implies a requirement for its substance.

¹⁾ *Saussure contre Saussure?* Cahiers 9, 1950, p. 10.

Many substances will do for the “*réalisation matérielle*”, but there are kinds of substance which will definitely not do, viz. every substance that would fail to show up the value of the units in question, which is to distinguish them from the others. Water, for instance, would never do for chessmen. Language depends on substance in as much as the substance must be able to realize language ¹⁾).

And what is more: the material fit for language units must not only be able to manifest *that* these units differ but also *how* they differ. Wells puts it like this: “If phonemes are characterized only by being different, it does not matter *how* they differ; pushed to its extreme this means that only the number of distinct phonemes matters. If any or all of the elements should be respectively replaced by materially different ones, provided that the same number be preserved, the system would be the same. There could not be two distinct systems of phonemes whose number of phonemes was the same, for if so they could only differ in some property or relation of the phoneme other than that of being different, which violates the hypothesis” ²⁾).

Pos states the same: “La constatation des rapports intelligibles ne saurait faire oublier le caractère *matériel*, le propre contenu qui caractérise les éléments phonologiques et *qui ne coïncide pas avec ces rapports*. Si les éléments n'étaient rien que les rapports, vus d'une façon isolante, il serait impossible de distinguer, dans un système phonique, entre deux phonèmes qui sont en rapport d'opposition et deux autres qui sont dans le même rapport: toutes les oppositions qu'on trouve dans ce système coïncideraient” ³⁾).

Hintze, in the article quoted above, distinguishes between two sorts of relations. There are what he calls the “external relations”

¹⁾ Cf. Hintze: “... die Art der Relationen selbst, auf die ja dann alles ankommt, ist, da es sich hier um nichtlogische Relationen (von “Gegenständen”) handelt, eindeutig bestimmt durch die Art oder Kategorie der Substanz, die der jeweiligen Form adäquat ist. Es lässt sich leicht einsehen, dass die rein logischen Relationsbegriffe (wie Identität, Implikation, Subsumption usw.) nicht ausreichen, um die nichtlogischen Relationen, wie sie in der Sprache gegeben sind, auszudrücken. Daher ist auch bei jeder rein relationellen Beschreibung einer nichtlogischen Form die Substanzkategorie, der die betreffende Form zugeordnet ist, schon implizit berücksichtigt”. (Fritz Hintze, *Zum Verhältnis der sprachlichen “Form” zur “Substanz”*. *Studia Linguistica* III, 1949, no. 1, p. 91, 92).

²⁾ R. S. Wells, *De Saussure's System of Linguistics*, Word III, '47, p. 13.

³⁾ H. J. Pos, *Perspectives du Structuralisme*, TCLP VIII p. 77 (Italics mine).

of phonemes, which only concern "the rules according to which the phonemes . . . of the language in question combine to form words" ¹). These rules together form, according to Hjelmslev, the expression system. But besides these external relations the phonemes have also, says Hintze, "internal relations" and "Diese internen Relationen bestimmen die innere Struktur eines sprachlichen Teilsystems. Durch sie ist das gegenseitige Verhältnis der Phoneme, die Stellung des Einzelphonems als Glied eines Systems bestimmt, d.h. die eigentliche Struktur des Phonemsystems. . . . Die ausschliessliche Beschreibung der externen Relationen führt . . . auf keine Weise zu einer Darstellung oder Struktur des *Phonemsystems* selbst". When Hjelmslev says that language can be "projected" on any substance and can be transposed from one substance into another (sound into ink, for instance), this concerns only "eine blosser Umsetzung, bei der ausschliesslich die externen Relationen erhalten bleiben in der Bewahrung der Zahl der Glieder und der Möglichkeiten ihrer Anordnungen (Reihenordnung). Der Charakter der internen Relationen, die das eigentliche sprachliche System konstituieren, ist aber bei einer solchen Umsetzung auf keine Weise zu bewahren" (*Form-Substanz*, p. 94). Hjelmslev admits this, as we shall see in Ch. VI: but the "inner structure" of the system of phonemes is of no importance to him, or rather: for Hjelmslev the *internal relations* of the phonemes are constituted entirely by the *relations of their external relations*. Thus they do not serve to distinguish the phonemes from each other as to their phonic qualities.

We can therefore take the term "internal relations" only in the sense in which Hintze introduces it and we must agree entirely when he states that it is also these relations on which the system of language is structured ²). Indeed it was a member of the Copenhagen linguistic Circle who noticed that if the *phonetic*

¹) H. Vogt, *The structure of the Norwegian monosyllables*, Norsk Tidsskr. f. Sprgv. XII 1942, 5-6, quoted by Hintze, p. 93.

²) Die strukturelle Sprachwissenschaft hat deutlich gezeigt, dass nicht nur die gegenseitige Abgrenzung der Sprachelemente das Wesentliche ist . . . sondern dass diese sich auf Grund der internen Relationen zu Systemen und Teilsystemen zusammenschliessen, bzw. in solche eingliedern. *Hierauf beruht die Tatsache der Strukturiertheit der Sprache. Gerade diese Struktur ist daher von der der Form adäquaten Substanz-kategorie abhängig, da auf ihr der Charakter der internen Relationen beruht*" (p. 94/95, italics mine).

qualities of e.g. Danish *p* and *k* are not taken into account and only their external relations are considered, these two phonemes will have the same definition in Danish because they occur in entirely the same places and would therefore have to be considered as one phoneme ¹⁾).

It is right that *phonetic* qualities should be emphasized. That language is independent of individual sounds, is quite true. But to be independent of something is one thing, to have nothing to do with it is another. Language is in a way 'independent' of its substance, sound: the same contents of thought can be expressed by entirely different sounds. But sound *is* its substance of expression; "... la langue", says Séchehayé, "n'est pas un système abstrait d'idées pures, elle est une combinaison particulière — "arbitraire" dit F. de Saussure — de matière *phonique* et de pensée" ²⁾).

To fathom the nature of language, to penetrate into the secrets of its foundations and of the structure of the building itself, we must study it in its natural manifestation: *speech*. Only then shall we discover the true structure of the system behind the text, of the "system bag forløbet" ³⁾. Only then will be revealed the essence of that system, its efficiency and coherence, a coherence "qui donne à réfléchir sur la pensée inconsciente qui semble présider aux systèmes phoniques. Cette pensée semble avoir saisi, dans chaque système phonologique, une matière *vocale* originaire, qu'elle distribue sur des éléments opposés. Sans cette matière, ni les éléments du système, ni la distinction des systèmes entre eux pourraient exister" ⁴⁾).

Has de Saussure realized this? I believe he has. For even when

¹⁾ E. Fischer-Jørgensen, *Louis Hjelmslev: Omkring Sprogteoriens Grundlæggelse*, Nordisk Tidsskrift for Tale og Stemme VII, 1943, p. 92.

In a later paper, however, the author says this is no reason to reject the method as she has done here. But then she assumes that besides this classification there will be others made on different grounds; and: "the different possibilities of establishing subcategories show interesting differences in linguistic structure". (*On the Definition of Phoneme Categories*, Acta Linguistica VII, 1952, p. 10). On this condition, there is no objection to the definition on distributional grounds of course. But on this condition only. For it should be remembered that the position of a linguistic element in the syllable appears to a great extent to be connected with its phonetic qualities. (Cf. p. 28).

²⁾ Alb. Séchehayé, *De la définition du phonème à la définition de l'entité de langue*, Cahiers Ferdinand de Saussure, II, 1942, p. 49 (italics mine).

³⁾ L. Hjelmslev, OSG p. 11.

⁴⁾ Pos, *Perspectives*, p. 78 (italics mine).

he uses his very strongest phrasing concerning the signifiant (which, he says, also applies to phonemes): "... il n'est aucunement phonique, il est incorporel, constitué, non par sa substance matérielle, mais uniquement par les différences qui séparent son image *acoustique*¹⁾ de toutes les autres" (*Cours* p. 164), we see that, contradictory as it may seem, even here he grants the phoneme some sound-substance, be it only the "abstract substance" of the *image* of a sound; but: the image of a *sound* it is! And in other places he is far more positive, as even the most zealous defenders of "langue non une substance" cannot deny: for instance when he says on p. 153: "D'autre part, fonder ces classements sur autre chose que des entités concrètes — ... — c'est oublier qu'il n'y a pas de faits linguistiques indépendents d'une matière *phonique* découpée en éléments significatifs" (italics mine).

Indeed, language can be expressed in other substances than sound. But all other possible substances of expression besides sound are only secondary and only try to *represent* in a more or less successful way *spoken* language. And in spite of the few isolated phrases that have been made so much of, I believe that this is what de Saussure also thought. There are too many remarks in his book, often casually made when he is dealing with other problems, which point in this direction. To mention only a few, taken at random: p. 103: "Le signifiant, étant de nature *auditive*, ...". Id. (speaking of the linear character of signifiants): "Ce caractère apparaît immédiatement dès qu'on les *représente* par l'écriture ...". P. 45: "Langue et écriture sont deux systèmes de signes distincts; *l'unique raison d'être du second est de représenter le premier*²⁾; l'objet linguistique n'est pas défini par la combinaison du mot écrit et du mot parlé; *ce dernier constitue à lui seul cet objet*" (italics mine).

Hjelmslev's "one-sided interpretation of the Saussurian concept of language"³⁾, which leads to the exclusion of sound

¹⁾ Italics mine. Cf also Hintze, *Form-Substanz*, esp. p. 100.

²⁾ See Bloch and Trager's definition of language, quoted on p. 12 note 4. Further: "Writing is a secondary visual representation of speech". (*Outline of Linguistic Analysis*, p. 6).

³⁾ P. L. Garvin, *Review of Prolegomena to a Theory of Language by Louis Hjelmslev*, *Language* 30, No. 1, Part 1, Jan./March 1954, p. 90. (*Review OSG*).

from language, also induces him, consequently, to reject the whole Saussurian concept of the "social side" of language: c.f. de Saussure: "La langue a un côté individuel et un côté social, et l'on ne peut concevoir l'un sans l'autre" (*Cours* p. 24). Frei has recently drawn attention to this duality of the Saussurian distinction between *langue* and *parole*¹⁾. 'Langue' is a social institution, 'parole' the individual use of it; 'langue' is a system of distinctive elements (values), 'parole' contains many non-distinctive elements. That Hjelmslev "bases glossematics on the latter dichotomy only, and rejects the former", as Garvin observes (p. 90)²⁾, is closely bound up with his rejection of sound from the concept of language. Hintze makes this clear in the article in which he stresses the "Wechselwirkung von Form und Substanz"³⁾: "in sozialen Akten bildet sich die Form der Sprache, die in der Substanz realisierbar ist, und in sozialen Akten wirkt die Sprachform auf die phonische Substanz ein. Sprache ist überhaupt etwas nur innerhalb der sozialen Gruppe Existierendes; sie ist ihrem Wesen nach etwas "zwischen den Menschen" (F. Mauthner)"⁴⁾. Sprache ist keine "reine Form als Schöpfung eines objektiven Geistes und sie ist nicht a priori gegeben." (p. 101). "... die Sprache, als System, als Form, (ist) ein Produkt der sozialen Gruppe ..., ein Produkt, das wesentlich "mit Hilfe" der Substanz,

¹⁾ H. Frei, *Langue, parole et différenciation*. Journal de psychologie 45, 1952, p. 137-158.

²⁾ Quoting, on p. 94, as a proof OSG p. 80: "sociological norm ... proves to be dispensable throughout linguistic analysis". Referring to Frei's observation that in many languages there are phonemic variants which, though non-distinctive, are yet 'socially obligatory' (144-5), Garvin concludes that the obligatory nature of such variants (e.g., English aspirated *p* initially, unaspirated *p* after *s*) "should ... be included in a description, to meet the requirement of exhaustiveness contained in the empirical principle. For such cases the ... transcendent concept of social norm must therefore be included. Indeed, in all actual phonemic descriptions, 'preferred variants' and 'obligatory variants' are included as a matter of course as part of the statement of allophones". (*Review* OSG p. 95).

³⁾ F. Hintze, *Form-Substanz*, p. 10. See p. 8 ff. of the present.

⁴⁾ C.f. A Reichling: "Speech is essentially a co-operative, instrumental act: language must be a co-operative tool or ... it is not!" (*De Taal, Haar Welten en Haar Wezen*. ENSIE II, 1947, p. 37).

"A language is a system of arbitrary vocal symbols by means of which a social group co-operates". (Bloch and Trager, *Outline*, p. 5).

"Everyone, when speaking to a new person, tries, deliberately or involuntarily, to hit upon a common vocabulary: either to please or simply to be understood or, finally, to bring him out, he uses the terms of his addressee. There is no such thing as private property in language: everything is socialized". (Claude Levi-Strauss, Chapter I of the *Results of the Conference of Anthropologists and Linguists*, p. 15. Supplement to IJAL 19, 2, 1953.

der phonischen Materie, geschaffen wurde ... In der Nichtberücksichtigung dieses wesentlichsten Kennzeichens der Sprache, nämlich ihres sozialen Charakters, scheint mir die eigentliche Ursache der sehr abstrakten Auffassung zu liegen, wie sie Hjelmslev vertritt ..." (p. 102, 103). Wells too, when enumerating three respects in which the "material envelope" as he calls it is relevant to the synchronic system, states: "De Saussure has nowhere implied that the independence (of the material envelope) is complete. He has only implied, by his doctrine that phonemes and signifiants are differential in function, that if one were to replace the material envelopes of all the signs of the system by any others whatsoever which would keep all those same signs phonemically distinct from each other, the relations of the signs and therefor the system would be preserved intact (see esp. 43b and 153d-4, and cf. 26)" (*De Saussure* p. 53). This clear formulation of de Saussure's theory shows that as far as the theory goes there can be no objection to it at all; we can only regret that de Saussure has not added what the *Cours* shows he did realize, but what he omitted to state expressly: that the only "material envelope" that can keep the signs phonemically distinct from each other must be able to represent their natural material envelope: sound.

That is why, after Hjelmslev's *Omkring Sprogteoriens Grundlaeggelse*, in which all language is reduced to functions, one of his pupils and colleagues has felt obliged to stress that "phonemic analysis must be based to a large extent on considerations of phonetic similarity and difference", and that "... in order to decide unambiguously which sounds occurring in different environments should be considered as belonging to the same phoneme, it is generally necessary to recur to the concept of phonetic similarity" ¹⁾.

¹⁾ E. Fischer-Jørgensen, *The Phonetic Basis for Identification of Phonemic Elements*, The Journal of the Acoustical Society of America, Vol 24, No. 6, November 1952, p. 611.

Cf.: "Danish has, e.g. 'vade-vaede', 'glade-glaede' but not 'made-*maede'. That we reckon with an *a* in 'made' is because it is *phonetically* the same as the *a* which in other cases is opposed to *æ*. Pure form-analysis could hardly decide whether it is an *a* or an *æ*. We could also establish e.g. that a language has 15 different elements 'im inlaut' and 10 'im auslaut', but we cannot decide which of them belong together, if *p* 'im inlaut', belongs together with *p* or with *t* 'im auslaut' ". (Eli Fischer-Jørgensen. *Review OSG* p. 92. Translation mine).

II. HISTORY OF GLOSSEMATICS, ITS NAME AND ITS OBJECT

1. *History of glossematics*¹⁾

Under the inspiring leadership of Prof. L. Hjelmslev of Copenhagen the circle of Danish linguists interested in phonology and the structural and functional side of linguistics grew considerably. When in 1934 the first *Bulletin du Cercle Linguistique de Copenhague* appeared Hjelmslev himself had already written two books in which the outline of the new theory became visible²⁾. In no. II of this Bulletin (1935) p. 13 ff. Hjelmslev himself gives a survey of the studies in linguistics of the Copenhagen group, which devoted its attention especially to general problems of this branch of science. The following data are taken from this survey.

In 1931 two working committees were established within the Copenhagen group, one for phonological studies, the other for grammatical studies. Their discussions on the principles of phonology induced three members of the "phonological group", L. Hjelmslev, P. Lier and H. J. Uldall, to build up a new theory of linguistic expression, which at first they called "phonematics". This theory was presented in 1935 to the IIInd International Congress of Phonetic Sciences held in London, in a communication by L. Hjelmslev on "*The Principles of Phonematics*" and by H. J. Uldall in his communication on "*The Phonematics of Danish*".

The work of the committee for grammatical studies had

¹⁾ See for further details also: Miss Eli Fischer-Jørgensen, *Danish Linguistic Activity 1940-48*, *Lingua* II, 1, p. 95-109. (1949).

And Eli Fischer-Jørgensen's lecture on *Glossematics* to the Washington Linguistic Club, March 1952, p. 1, note (stencilled), kindly put at my disposal by the author.

Also Knud Togeby, *Linguistics in Denmark: 1940-1948*, Symposium III, 2, p. 226-37, 1949; on p. 232 some parallels are drawn between recent Danish theories and American, between Hjelmslev and Sapir, Bloomfield, Harris; between Diderichsen and Wells and Nida; between Fischer-Jørgensen and Pike.

For another comparison see Charles F. Hockett, *Review of Recherches Structurales*, *IJAL* 18, 1952, p. 86-99.

²⁾ L. Hjelmslev, *Principes de grammaire générale*, 1928, and *Etudes Baltiques* (thèse), 1932.

meanwhile come to a standstill, but was resumed again by Hjelmslev and Uldall when they took up as their special study the problem of the mutual relations between the phonematic and the grammatical systems. These studies resulted in a new theory in which they united the theory of phonemes with the grammatical and the semantic theories. To stress its originality and its entire independence of every preceding linguistic theory it was given a new name: "Glossematics" ($\gamma\lambda\omega\sigma\sigma\alpha$ = language), the linguistic elements it deals with being called "glossemes". On 18 December 1935 this new theory was presented by Hjelmslev and Uldall to the "Humanistisk Samfund" of Aarhus and communicated in a course at Aarhus University.

In the first volume of the periodical of this organisation (Humanistisk Samfunds Skrifter I) there appeared an article by the two authors entitled *Synopsis of an Outline of Glossematics*, in which they referred to the full outline of the theory to be published in the autumn of that year. For various reasons however, the *Outline* has not appeared as yet ¹⁾ but in the course of the eight years following the publication of the *Synopsis* various other publications saw the light, both from the hands of Hjelmslev and from Uldall.

Unfortunately they were all either of too general a nature or dealing too especially with certain details for "outsiders" to get a clear idea as to the real purport of the theory proper. Besides, these papers were all written while the originators of the theory were still struggling to find the right terms for their new concepts and this struggle makes itself felt in a considerable inconsistency of terminology. The unsuspecting reader should be warned: when he wants to get acquainted with Hjelmslev's ideas and starts at the beginning he will (to mention but one striking example) find in *Principes de Grammaire Générale* (1928) that the only right method to analyse language is the *inductive* method (p. 42). But having advanced with his studies to Hjelmslev's *Omkring*

¹⁾ Although M. Perrot at the back of his "*La Linguistique*" (p. 134) mentions among the "Principaux ouvrages de doctrine ... Sur la glossématique: "L. Hjelmslev and H. J. Uldall, *Outline of glossematics. A study in the methodology of the humanities, with special reference to linguistics, I, General theory* (par H. J. Uldall), 1952", the book has still not been published but has been held up in page-proof ever since 1952. It is only because Mr. Uldall has been so kind as to lend me one of his own copies that I am able to consider the book in the present study. But it will probably appear before 1955.

Sprogteoriens Grundlaeggelse (1943), which is meant to be the complete and final rendering of the bases of the theory, he will there find the same author defending with all the power of his penetrating style that only the *deductive* method is the right one for linguistic analysis (p. 13). On closer inspection he will discover that what Hjelmslev means by *inductive* in 1928 is in a certain sense implied in what he means by *deductive* in 1943 ¹⁾. The most important of these changes in terminology will also have to be mentioned in the following chapters, because they are very disturbing to whoever reads other glossematic works besides OSG without being aware of them.

2. Name and object of glossematics

Unlike the name of "*phonematics*" the name of "*glossematics*" contains nothing to remind us of its origin: phonology. And this has its reason. As compared with the object of phonology: the study of the elements of expression of *spoken* language, the object of glossematics has extended in two directions, basing itself on the above mentioned new theory of de Saussure.

De Saussure taught that not only the expression side of language, the amorphous mass of *sound*, is shaped by the mould of language, but that in a similar way it is language which gives "shape" to the otherwise amorphous mass of *thought*, and that this world of "shaped thoughts" is built up according to a definite system, just as the world of "shaped sounds", i.e. speech sounds of a language is built up according to a definite system, the "sound system" of that language. It is this "thought system" that glossematics draws into its field of study as constituting an essential part of language. This is the first extension. De Saussure did not quite leave out this world of thought from his analysis, but he considered the "content" only in as far as it was linked up with *expression units*. It will be seen that Hjelmslev wants to go much farther and makes a first attempt at analyzing the content independent of the expression, in a certain sense.

De Saussure had an open eye for the two-sidedness of the linguistic sign, the sign is "*la combinaison du concept et de l'image acoustique*" (*Cours* p. 99) (to leave the psychologism aside for the moment). And from *Cours* p. 158–166 it appears that he was

¹⁾ See for a full discussion of the meanings of these words pp. 41 ff.

not blind either to the difference in structure of the two planes. Yet, in the schemes he gives (p. 146, p. 156) and in his numerous examples he reckons with only *one* form ¹⁾. Hjelmslev emphasizes the difference in structure of the planes by introducing a *second form*, thus distinguishing between *expression form* and *content form*. The linguistic sign is then defined as "the unit consisting of content-form and expression-form" (OSG p. 53).

Both forms manifest themselves in a "substance". The glossematic concept of substance is rather different from what linguists have usually understood by it. The shortest and clearest rendering of the glossematic conception is given by Eli Fischer-Jørgensen: "La forme se manifeste dans une substance qui sur les deux plans peut être considérée soit comme un phénomène physique (sons ou graphèmes sur le plan de l'expression, choses sur le plan du contenu) soit comme un phénomène psychologique (la conception du sujet parlant des sons et des choses)" (*Remarques sur les principes de l'analyse phonémique*. Recherches p. 215). Therefore: "ce n'est pas seulement la substance du contenu qui est "mentale" ni la substance de l'expression seule qui est physique. Toutes les deux se laissent concevoir de deux façons". (Id. p. 219 ²⁾).

The study of the elements of thought, directed to the plane of the content (Fr. contenu), is called *plerematics*, the units it deals with are *pleremes* (from Gr. πλήρης = full: these units "contain" a "lump" of meaning, so to say).

The study of the elements of the other plane of language, the elements of expression, is called *cenematics*, the units it deals with are *cenemes* (from Gr. κενός = empty: these units "contain" no meaning ³⁾). That this part of glossematics, which studies the same units as phonology does, is nevertheless given another name,

¹⁾ See for a detailed treatment pp. 146 ff.

²⁾ See for a similar parallelism: Carl Ebeling, *Phonemics and Functional Semantics*, Lingua III, 3, 1953, p. 312. "The realization of a phoneme is a speechsound, the realization of a seme (= a relevant unit of content, BS) is its application to reality (interpretation). The realization of a phoneme is influenced by the phonetic context, the realization of a seme by the semantic context". Cf. Hjelmslev: "Le rapport entre la forme du contenu et la substance qu'elle est destinée à organiser peut s'appeler *désignation*; la substance du contenu est le *designatum*; considéré au point de vue physique, c'est le monde des choses; considéré au point de vue psychique, c'est la pensée". (*Rôle structural de l'ordre des mots*, Journal de Psychologie normale et pathologique, Janvier-Mars 1950, p. 54). The matter will be dealt with further on (p. 147 ff.).

³⁾ As to morphology and syntax, see p. 22.

has its reason in the other theorem introduced by de Saussure and interpreted by glossematians as meaning that language is *form*, not substance, and that it does not matter, therefore, what substance is used to make the form visible or audible or tangible, as long as it manifests the form. Hence the other name: it implies the second extension of the object of study as compared with the object of phonology: it is not only *phonemes* that are studied, not only the elements of spoken language ($\phi\omega\nu\acute{\eta}$ = voice); *cenemes* may materialize in writing or gestures (the "substance" of expression of deaf-mutes) just as well as in speech. Moreover: also within one and the same kind of substance one and the same ceneme may have many different realisations. If the substance is sound, for instance, a ceneme may materialize in entirely different sounds at different times in the history of a language or in different languages, if it should so happen that two different languages should have a set of 'the same' cenemes. Diachronic linguistics offers plenty of instances, from many languages, of complete changes of speechsounds with the systems of the languages in question remaining the same because the relations between their elements remained unchanged. The "substance" has nothing to do with the form as such; "la forme linguistique", says Hjelmslev, " ... ne recouvre aucune forme extra-linguistique" ¹⁾. That is why, for the units of expression, the term "*phonemes*" would not do as being too narrow, and why the term "*cenemes*" has been created.

In the same way the units of the content (pleremes) may according to Hjelmslev materialize in different significations and in different "things" in the world around us. For Hjelmslev recognizes different "levels", different "stages" of content-substance, the first of which is the world of "concepts", of "significations", or simply "thought", after which comes the world of the "things" themselves around us. They too, says Hjelmslev, belong to the linguistic "content": speaking of a ring as "that definite thing on my finger", he goes on to say (OSG p. 52): " ... *that thing on my finger is an entity of content-substance ...*". Also *this* "substance" has nothing to do with the content-*form* as such. An example of what Hjelmslev means is, e.g., the phenome-

¹⁾ L. Hjelmslev et H. J. Uldall: *Etudes de Linguistique Structurale*, Bulletin du Cercle Linguistique de Copenhague II 1935, p. 15 ff.

non that two entirely different "content-substances" such as a black and a brown cow are in one language united in *one* content-form 'cow' whereas in another language, which has no word for 'cow' but only for either 'black cow' or 'brown cow', they are 'formed' in *two* different forms. Also the content-forms are only defined by their relations.

Thus we see that both cenemes and pleremes are exclusively defined by their *relations*, that is what Hjelmslev calls their *functions*: "... the important thing is not the division of an object into parts, but the preparation of the analysis so that it conforms to the mutual dependences between these parts, and permits us to give an adequate account of them" (OSG p. 21/22). Cf. de Saussure: "Ainsi, dans un état de langue, *tout repose sur des rapports*; comment fonctionnent-ils?" (*Cours* p. 170, italics mine)¹.

There is a similarity and a difference between the relations which each of the two linguists recognizes.

De Saussure reckons with "rapports syntagmatiques": the relations between signs *in the text*, and "rapports associatifs": "les groupes formés par *association mentale*" (*Cours* p. 173), by which he means, in the words of Wells: "that each syntagm ... is capable of associatively recalling all the other syntagms that have the same pattern (décoller — déplacer...)" (*De Saussure*, p. 10, 11). These two relations are also recognized by Hjelmslev. The first is the "*both-and* function or 'conjunction'", belonging to the *syntagmatic* which is another word for the *text* (OSG p. 22, 24)².

¹) Cf. Brøndal: "Si la langue est un système de signes, les classes doivent également former, dans un état de langue donné, une totalité dont chaque membre prend son existence et sa valeur du fait de ses rapports avec les autres membres". (*Ordklasserne*, 1928, p. 237).

²) A text, in Hjelmslev's sense, includes all that there is of a language, anything said or written or anything that might be said or written in that language. We might call it: the use of a language, or rather: *used language*.

Garvin notes down this term 'text' as far more satisfactory than the ill defined American term 'utterance', of which one does not know where it begins or ends. (Cf. Garvin, *Review OSG* p. 71).

That there are different ideas as to the integrity of the text appears from Togeby, *Structure immanente de la langue française*, p. 23:

"Il faut éliminer certains éléments de ce texte et il faut y en introduire d'autres. Tous les mots et les constructions appartenant à d'autres langues sont tout naturellement éliminés, si l'on s'imagine une procédure appliquée à toutes les langues à la fois".

It seems as if Togeby shares the glossematic ideal of finding a system to describe and compare all languages, in order to arrive at a true typology of languages and at an establishment of the essential characteristics of each. This is Hjelmslev's object and it is the reason why he has set up his theory the way it is. But it seems that Togeby, does not realize that the "starting at the undivided text" belongs

With a dismissal of de Saussure's notion of "association" the second relation is in glossematics the "either-or function or 'disjunction'", belonging to the *paradigmatic* which is another word for the *system* (OSG p. 22, 24). Both of these functions can be reckoned among what glossematics calls the *homoplane functions*: they are relations between entities *within the same plane*.

But the second of these two homoplane functions, de Saussure's "rapport associatif", the "paradigmatic function" as it is sometimes called by glossematicians, is arrived at in a far more truly linguistic way by glossematics than by de Saussure. De Saussure finds the units of the same pattern by "association", Hjelmslev by the linguistic test of *commutation* (See p. 166 ff). Hjelmslev realizes that besides the homoplane function there is another relation that functions in language: that between an entity in one plane and an entity in the opposite plane: the *heteroplane function*. To this relation de Saussure only pays attention in one respect, viz. for his well-known statement that the relation between "signifié" and "signifiant" is an arbitrary one. But he fails to see it as a *functional* relation ('functional' to be taken in the ordinary sense here). This lack of attention to the heteroplane function with de Saussure is connected with his neglect of the system of phonemes: he does not apply the commutation test yet. The nearest he comes to it is on p. 180, where he mentions Latin "*domini* vis-a-vis de *domino* ... où la différence repose *par hasard* sur un simple phonème ..." (italics mine), and where, in the group "*anma*" the sound *m* is said to be "en opposition associative avec tous ceux que l'esprit peut suggérer, soit: *a n m a*

v
d ''.

The heteroplane function — and "c'est cette sorte de fonction qui se révèle par la 'commutation' " says Hjelmslev — is rightly considered by him the key function on which all linguistic analysis is based. It is an important feature of glossematics that over

to the final stage of the analysis, when we are in the possession of a complete description of all languages in terms of relations between their constitutive elements. If he does realize this, as might appear from his words: "une procédure appliquée à toutes les langues à la fois", it may be pointed out that we do not as yet possess all the details necessary for such a final, controlling analysis, and that consequently an analysis of a single separate language should not start at the "division of the undivided text".

against American one-plane theories the fact is brought forward with great emphasis, that the plane of the content too belongs to language. (Cf. Eli Fischer-Jørgensen, *Remarques sur les principes de l'analyse phonémique*). M. Martinet speaks in this connection of the "séductions du structuralisme", emphasizing too that "Même si nous ne suivons pas jusqu'au bout Louis Hjelmslev lorsqu'il établit entre la structure du contenu et celle de l'expression un parallélisme parfait, il reste incontestable que nous ne pouvons étudier l'une qu'en nous référant sans cesse à l'autre". (*Ou en est la phonologie?* *Lingua* I, 1, p. 40).

When we have found the various cenemes and pleremes of a language by the heteroplane function (commutation test), we must name them arbitrarily to guard ourselves from fixing them to any definite "substance". We may name them algebraically a, b, c, d, etc., or we might just as well number them 1, 2, 3, etc. Then we must note down all the possible combinations of each ceneme or plereme by an algebraic notation, this is how we "describe" them ¹⁾. The totality of possible combinations of an entity of a certain language constitutes its 'form' in the glossematic sense. This term 'form' is entirely different from what Bloomfield calls a 'form'. Bloomfield's 'form' "does not simply correspond to glossematic *expression*, but partly also to glossematic *form of content*" (Eli Fischer-Jørgensen, *Washington Lecture on Glossematics*, p. 4). The latter correspondence is based on the fact that "what Bloomfield calls a "selection of forms" to a large extent covers the glossematic functions of the content, the *form of the content*" (*ibid.*). The ordinary conception of 'form' as an organised perceptible datum does not cover Hjelmslev's conception of 'form' either.

From the data thus obtained, from as many languages as possible, we can make an algebraic calculation of what combinations of entities are theoretically possible. "Such a linguistics", says Hjelmslev, "... would be one whose science of the expression is not a phonetics and whose science of the content is not a semantics. Such a science would be *an algebra of language*, operating with unnamed entities, i.e., arbitrarily named entities

¹⁾ Cf. Wells' example of an "unsubstantial" characterization of morphemes, *Review Recherches* p. 556.

without natural designation, which would receive a motivated designation only on being confronted with the substance" (OSG p. 71, *italics mine*).

Another result of this description of the units of language by their relations only is that the wall which has hitherto separated morphology from syntax — and, it will be seen, several other walls into the bargain — is pulled down. For in this way phonemes, clusters of phonemes, syllables, morphemes, words, word-groups and sentences will all be described according to the same method, and there is no reason to separate one part of this description from the rest. Already on p. 25 OSG Hjelmslev announces this: "the division into morphology and syntax ... which ... we shall be led to abandon as inadequate" ¹⁾.

This idea of an algebra of language with its consequent abandoning of time-old divisions in linguistics is another of de Saussure's notions which Hjelmslev has taken over and elaborated much more: he makes linguistics more algebraic than de Saussure does. De Saussure does not speak of the algebraic calculation of all the possible language systems. But he does hold the idea of an algebraic description of existing languages and of its consequent fusion of morphology, syntax and lexicology:

Because "la valeur de l'un (terme) ne résulte que de la présence simultanée des autres" (*Cours* p. 159), "ce qu'on appelle communément un "fait de grammaire" répond en dernière analyse à la définition de l'unité, car il exprime toujours une opposition de termes". In German "*Nacht-Nächte*" ... "chacun des termes mis en présence dans le fait grammatical (le singulier sans umlaut et sans *e* final, opposé au pluriel avec umlaut et *-e*) est constitué lui-même par tout un jeu d'oppositions au sein du système; pris isolément, ni *Nacht* ni *Nächte*, ne sont rien: donc tout est opposition. Autrement dit, on peut exprimer le rapport *Nacht-Nächte* par une formule algébrique $a\ b$, où a et b ne sont pas des termes simples, mais résultent chacun d'un ensemble de rapports. La langue est pour ainsi dire une algèbre qui n'aurait que des termes

¹⁾ Cf. H. J. Uldall: "Within linguistics itself it (i.e. the concept of the "direction of functions" as Uldall calls it, BS) has already proved its usefulness by bringing together under one explanation "syntactic", "morphological", and "phonetic" phenomena which before seemed totally unconnected". (*On Equivalent Relations*, *Recherches*, p. 71).

complexes. Parmi les oppositions qu'elle comprend, il y en a qui sont plus significatives que d'autres; mais *unité et fait de grammaire ne sont que des noms différents pour désigner des aspects divers d'un même fait général: le jeu des oppositions linguistiques*" (Cours p. 168, italics mine).

When thus a calculus has been made of all possible combinations of units these combinations together form *the system of language*, according to Hjelmslev. This system will include all linguistically possible combinations or relations, that is, all linguistic '*forms*' in the glossematic sense, not only the '*forms*' of every existing language but also all other theoretically possible '*forms*', whether they are used by any language, whether they are "materialized" or "realized" in any language, as Hjelmslev calls it, or not ¹⁾.

With the aid of this system we shall have to approach every particular language and see which of the '*forms*' of this general system have been realized in every particular language. Every language is "characterized" by the '*forms*' it realizes: by the possibilities of combination of its units.

This is what Hjelmslev means when he says the '*forms*' shall be found independently of the substance. It has caused very much confusion, because in the whole procedure described just now there are *three* different acts of '*finding*':

a. Finding the *actual forms* (the units and elements themselves) in actually existing languages to describe them algebraically afterwards, thus establishing their '*forms*' in the glossematic sense.

b. Finding, out of these, by an 'algebraic' operation, the *possible 'forms'* to register all of them in a 'system'.

c. Finding, by confronting every particular language with this system, *which 'forms' out of that system have been realized* in that particular language: which combinations out of the whole system occur in it.

That finding^b and finding^c are the ultimate end of glossematic theory has not been realized by many of Hjelmslev's critics ²⁾.

¹⁾ For parallels between Hjelmslev's reasoning and that of the so-called American School, see: Einar Haugen, *Review of Prolegomena*, IJAL 20, no. 3, 1954, p. 249, 250.

²⁾ C.f. L. L. Hammerich, *Les glossématises danois et leurs méthodes*, Acta Philologica Scandinavica, 21 Aargang, 1. Hæfte p. 1-21. 1950.

A. Martinet: *Au sujet des Fondements de la Théorie linguistique de Louis Hjelmslev*.

Because Hjelmslev never mentions which of these three stages of 'finding' he means at a given moment, he is reproached for, i.a., wanting to find^a and to recognize the units of a certain language independently of their substance. And indeed many statements in OSG and other papers are worded in such a way as definitely to give this impression. Especially in his earlier publications it is stressed over and over again that "die Definitionen *und die Erkenntnis* der Einheiten ... der Sprache können und müssen stattfinden ohne jede Rücksicht auf der Stoff, worin sie sich manifestieren" (*Neue Wege der Experimentalphonetik*, 1938, p. 158, italics mine); "la forme ne peut être *reconnue* ... qu'en faisant abstraction de la substance" (*Les rapports entre forme et substance linguistiques*, Bulletin du C. L. de Copenhagen, IV, 1937-38, italics mine). Of course this has puzzled many, because it would be in complete contradiction to the method Hjelmslev describes to find^a the forms of any particular language, viz. the *commutation test*, which means that in any particular language the entities in both planes are found^a and recognized by, or rather *in*, their substance as part of all the substance used in that language. (See pp. 101, 104). [And in later publications Hjelmslev admits that the commutation test makes use of the substance of the entities (See p. 176). It is easy to understand that the difference between these statements might lead to the conclusion that Hjelmslev has changed his theory on this point. The only way to prevent a contradiction between the two viewpoints and to bring them in agreement with each other and also with Hjelmslev's own denial of a change, is, as far as I am able to see, a clear distinction between the various stages of glossematic analysis, and a clear indication every time which stage is referred to.

Once the entities have been recognized, found^a, Hjelmslev wants their description to be made independent of any substance in the above mentioned shape of a "linguistic algebra".

That there are serious objections to be made to this way of describing has been pointed out by various critics, most thorough going by Hintze¹⁾. The matter will be discussed in detail on p. 99 ff.

BSLP 42, Paris 1946, pp. 19-43.

H. Vogt, *Louis Hjelmslev, Omkring Sprogteoriens Grundlaeggelse*, Acta Linguistica IV, 1944, p. 94-99. (Review OSG).

P. Garvin, *Review OSG*, esp. p. 74.

¹⁾ Also, among others, by Eli Fischer-Jørgensen, A. Martinet, and H. Vogt.

Besides the difference as to substance there is another point on which there is a difference between the recognition of the entities of a particular language and their description and definition: whereas for their recognition (by commutation) their relations to the units in the opposite plane (their heteroplane functions) are of first importance, for their description it is their relations to the other units in the same plane (their homoplane functions) that matter most. In OSG Hjelmslev even writes: "a description in accordance with our principles must analyze content and expression *separately*" (OSG p. 42; italics mine). Here, however, we have a clear instance of ambiguous phrasing, for here it seems again as if Hjelmslev thinks also to *find*^a the entities in each plane of a particular language without reference to the other plane, so only by their homoplane functions. For he continues this same sentence: "..... with each of the two analyses eventually *yielding* (italics mine) a restricted number of entities, which are not necessarily susceptible of one-to-one matching with entities in the opposite plane".

However this may be, it seems that the whole procedure of the analysis of language with respect to *substance* and *function*, as suggested by Hjelmslev, may be summarized as follows:

1. The entities of the two planes, expression and content, of a particular language must be *found* and recognized both by their *heteroplane functions* and in their *substance*.

2. Once the entities have been found and recognized they must be *described* and defined by their *homoplane* functions *without* reference to their *substance*. This description will be an algebraic notation.

3. The entities are tentatively drawn up into a *provisional system*.

4. This must be done for as many languages as possible.

5. On the basis of the greatest possible number of data thus obtained, a *calculation* is to be made, by *algebraic* operations, of all relations actually found and theoretically *possible*.

6. The calculus of these relations is the system, not of a language or of *many* languages, but the *system of language*.

7. Every particular language shall be confronted with this system, and show up its character by the relations it has chosen to realize. By these it will be possible *to describe each language*

completely in a general algebraic notation applicable to all languages. The tentative systems, previously drawn up of each language, will thus be revised where necessary and receive their definite forms.

Hjelmslev has, like none before him, systematized some of the chief functions to be found in language. This is one of the great contributions of glossematic theory to linguistics. The following chapters will try to decide to what extent a description of language by these functions only is possible, and, if it is made, whether it will not stop being a description of *language*. There is an essential difference between algebra and linguistics as regards the nature and the origin of the entities these two sciences work with. The operations in linguistics will always have to be restricted to a registration of the combinations we find in actual language, that is, in particular languages, and to possible systems drawn up only along the lines found in particular languages. In other words, the operations in this sense will have to be restricted to new combinations of 'old' entities ¹⁾).

Of course we may try to register what "possibilities" each language utilizes out of the general calculus and thus denote that language's relation to this "general system" and through it to other languages. In this way we succeed in "placing" every particular language somehow. But would it be a very satisfactory "description" of any language? I doubt if it would give us an idea as to what any *particular language* is like. But that is not the object of glossematics.

Herewith I have arrived at some details of the theory, which will be given in full in the following chapters. As a guide I shall use Hjelmslev's *Omkring Sprogteoriens Grundlaeggelse*, this being the only complete exposition of glossematics available ²⁾), or rather of its prolegomena.

A few words about this book.

As early as 1935, at the second International Congress of Phonetic Sciences, the publication had been announced of a complete theory of glossematics. When the long expected work appeared in 1943, however, it proved to be somewhat disappointing.

¹⁾ Cf. the example of the time-table, p. 4.

²⁾ On the *Outline of Glossematics* by Uldall see p. 15, fn.

First of all it was in Danish, so many scholars could only get acquainted with its contents indirectly, through reviews and discussions of it. Secondly, the work is very concise, and if the reader in studying it does not understand one sentence, he will not be enlightened by the following, and the rest of the book will be a puzzle to him. What makes it even more difficult reading is the fact that the terminology used is an entirely new one: in a space of 112 pages the book gives 105 definitions. The reader constantly has to turn back the pages in search of the meaning of the terms used. Another difficulty is that the book gives next to no application of the theory in practice to the real facts of language. Considering the great number of new concepts the author introduces, many of which are difficult to grasp for a linguist pure and simple who has not studied logic, a few more examples would have been a great help ¹⁾.

Of course, Hjelmslev only claims to give the prolegomena to a theory which will indicate the method to attain at true linguistics; but there is nothing in the book to indicate that the method of analysis which we find described (the "partitions") is meant as a final control on the ordinary analysis of language (by trial and error) and thus is not meant to substitute something better for other, already existing, methods of analysis, but, on the contrary, presupposes those other methods and only wants to be the additional finishing touch to them. The absence of any hint at this 'setting' of glossematic theory causes confusion. The reader will probably be under the impression that he has to do with the presentation of an analysis for newly discovered languages never analyzed before, an impression which is strengthened by passages such as, e.g., "If the linguistic investigator is given anything ... it is *the as yet unanalyzed text in its undivided and absolute integrity*. Our only possible procedure, if we wish to order a system to the

¹⁾ Uldall's *Outline* will fill the gap. The book consists of two parts, the first (p. 1-35) being an elaborated and somewhat popularized presentation of some of the main principles of OSG. In part 2 (p. 36-87) the glossematic algebra is set up and actually applied to facts of language, in which, however, it is emphatically stated that the author refuses to be held responsible for the ultimate validity of his examples (p. 39, fn. 1). This part is the most instructive and indispensable for those who wish to get some idea of how the algebra of language is put into practice. It also gives the various symbols used later on by members of the Copenhagen Circle to denote the various functions and their relations, which symbols we find also, with slight variation, in a footnote on p. 25 of the English version of OSG (not in the original). On p. 96 a page from the book is quoted for an instance.

process of that text, will be ...” (OSG p. 13, italics mine). When reading and dealing with glossematic writings we shall always have to remind ourselves of this checking, controlling character of the theory.

As *Omkring Sprogteoriens Grundlaeggelse* is to be my guide in my attempt to give a report on glossematics, I shall more or less follow the order of subjects as they are dealt with there, comparing them with previous and later views of the author and occasionally with those of other members of the Copenhagen group of linguists.

It is on purpose that I do not use the term *glossematicians* here. The interest Copenhagen linguists take in glossematics is great, and there is an enviable general activity and enthusiasm among them for the study and discussion of glossematic and all other linguistic problems; but the number of true glossematicians is very much smaller than some critics would make us believe. Especially Prof. Hammerich's paper: *Les glossématises danois et leurs méthodes*¹⁾ does not give an impression of the actual state of things. The Copenhagen group of linguists do not want to be called a “school” whose programme would be glossematic theory. It is stated emphatically in the preface of *Recherches Structurales*, a collection of studies by members of this group²⁾. The Copenhagen Circle of Linguists do no more than what is required of every scholar: to test a new theory that has been put before them, in order to ascertain its value by trying to apply it to the facts it is made for³⁾. That their views of language are influenced by it is natural. On the other hand, that in their discussions there is no lack of criticism of glossematic theory will

¹⁾ Acta Philologica Scandinavica, 21 Aargang, 1 Haeft, p. 1–21.

²⁾ *Recherches Structurales*, TCLC V 1949.

³⁾ The study of Diderichsen in *Recherches*, e.g., is, in his own words, “une tentative de vérifier si la méthode est pratiquement applicable à une matière concrète et de compléter, d'interpréter et, si possible, d'améliorer la théorie de M. Hjelmslev, qui lui-même n'en maintient d'ailleurs plus tous les détails. Il s'agit donc d'une sorte d'expérience ou de calcul: telles conditions et définitions théoriques étant données, la description des formes danoises sera telle. Le résultat est présenté sous de grandes réserves, puisqu'une série de doutes ont surgi, pendant l'élaboration de l'étude, à propos de l'interprétation de certains points des théories de M. Hjelmslev, et que de nouvelles définitions sont proposées, sans avoir encore été discutées à fond. Il n'est par conséquent pas tout à fait honnête de citer l'étude comme si les opinions émises représentaient la conception définitive et absolue de l'auteur”. (*M. Hammerich et ses méthodes*, Acta Philologica Scandinavica 21, 2–1952, p. 89).

be known to everyone who has been privileged to attend those meetings or to see the reports of them ¹⁾). It is also obvious from the *Recherches Structurales* themselves. It would not be fair, therefore, to judge the volume as presenting the final results of investigations by the adherents of glossematics — it would not be fair to the linguists who have contributed to it or to glossematic theory ²⁾). *Recherches Structurales* should be read as une tentative de bilan provisoire d'une discussion mouvementée, qui bat encore son plein" ³⁾.

As a matter of fact, Hjelmslev himself lays great stress on the provisional, tentative nature of glossematic analysis in practice, even when applied by himself. His analysis of the Danish expression system, for instance, is introduced by him as "provisional and problematizing", and he adds the remark that "there is sometimes ... a regrettable tendency to consider structural analyses as definitive and not to understand that the scientific results in this field are just as relative as those in other fields" ⁴⁾. Therefore, where the present study deals with such glossematic analyses as have been published, only the basic principles revealed by those analyses will be considered.

Returning to *Omkring Sprogteoriens Grundlaeggelse* (here denoted as OSG): now that we have Mr. Whitfield's translation ⁵⁾ for reference I shall attempt, in rendering the theory, to dispense with as many of the new terms as possible, using only those that are absolutely indispensable for following the trend of thought. It is an attempt to "vulgariser la glossématique tout en restant dans les cadres de la terminologie traditionnelle et courante", as

¹⁾ Cf. the reply to Hammerich's article by Diderichsen (see p. 28 fn. 3): "ceux qui ont assisté aux discussions savent que les "glossématicistes" les plus intéressés sont aussi les plus critiques" (p. 88).

²⁾ Cf. Hockett, *Review Recherches*, p. 86 and Garvin, *IJAL* 17, 1951, p. 252-5; *Language* 30, no. 1, part 1, 1954, p. 69.

Cf. also Wells: "(RS) is neither designed nor suited for ... (the) purpose ... to be used as an introduction to Hjelmslev's writings" (*Review Recherches Structurales*, *Language* 1951, 27, p. 554).

³⁾ *Recherches Structurales*, Preface.

⁴⁾ L. Hjelmslev, *Grundtraek af det danske udtrykssystem med saerligt henblik på stødet*. Selskab for nordisk filologi, Arsberetning for 1948-49-50, p. 12 (transl. mine).

⁵⁾ *Prolegomena to a Theory of Language* by Louis Hjelmslev, translated by Francis J. Whitfield. Supplement to *International Journal of American Linguistics*, Vol. 19, No. 1, January 1953. Indiana University Publications in Anthropology and Linguistics, Memoir 7 of the *International Journal of American Linguistics*.

Mr. Kuryłowicz puts it in his paper on *La notion de l'isomorphisme* (*Recherches* p. 48). I am fully aware that it is right what Firth says: "the terminology (of Hjelmslev) is necessitated by a system of thought" ⁴⁾. But it is therefore that I have done my utmost to render the meaning of the terms used by Hjelmslev correctly and to avoid ambiguities in using the old terminology where it could give rise to them.

The reference to pages in OSG is to the pages of the Danish original, which numbers Mr. Whitfield gives too in the margin of his translation.

In spite of all the difficulties enumerated above (p. 27), the appearance of OSG has been an event the importance of which is only gradually being realized in the world of linguistics. Garvin writes: "Hjelmslev's outstanding merit lies in having pulled together, for the first time in modern linguistics, a tangle of theoretical details into a logically consistent, close-knit body of definitions and corollaries, based on a minimum of assumptions. In spite of some serious deficiencies, he has been able to assemble into a single deductive system many insights and techniques of structural linguistics previously scattered through the literature. The *Prolegomena* can thus serve as a skeleton for a less one-sided, more far-reaching (and perhaps more definitive) general theory of language, a skeleton in which the 'pattern points' for additions and improvements are often already in place" (*Review OSG* p. 95).

The present study does not have the pretension to build further on this skeleton and to put forward such a "less one-sided, more far-reaching ... general theory". It wants to present no more than a closer look at the skeleton itself, confronting it mainly with the general trend of Hjelmslev's own analysis, to decide, if possible, about some of the 'pattern points' whether they appear to be already "in place".

⁴⁾ J. R. Firth, *The Semantics of Linguistic Science*. *Lingua* I, 4, p. 394. See, however, Einar Haugen's *Review of the Prolegomena* for another opinion. (*IJAL* 20, no. 3, 1954, p. 251).

CHAPTER I

THE AUTONOMY OF LANGUAGE. PROCESS AND SYSTEM. LINGUISTIC THEORY AND EMPIRICISM

1. *The autonomy of language*

In the first chapter of OSG Hjelmslev lays great stress on the autonomy of linguistics amidst other sciences. For a long time language used to be considered as the key that could open the door to the system of human thought, it was a means to get to know something outside language itself, the “means to a transcendent knowledge, not the goal of an immanent knowledge” (OSG p. 6). Thus, the theory of speech sounds became pure physics or physiology and the theory of signs pure psychology, logic or ontology. The danger of overlooking language itself in these studies was the greater as language wants to be overlooked, its natural tendency is to be a means, not an end, and it is only by artifice that the searchlight can be directed on the means itself of obtaining knowledge.

Yet this is what has to be done. To create a true linguistics, language should be studied “not as a conglomerate of non-linguistic phenomena, but as a self-sufficient totality, a structure *sui generis*” (OSG p. 7).

This would not only be the sole true method for a *synchronic* linguistics, it would also be the only way to establish a real and rational *diachronic* linguistics: the theory of such a linguistics could provide a uniform basis of comparison between languages, by forming concepts which would no longer be applicable only to certain regions of language, to certain particular languages or groups of languages, but to all.

On this point of the autonomy of language, which, though a *means* to obtain other knowledge, is not *part* of that other knowledge, Hjelmslev is far more decided now than he was in 1928, when he wrote his *Principes de Grammaire Générale* ¹⁾.

¹⁾ Much of “*Principes*” has been changed or withdrawn by Hjelmslev in later

There he says that as language is “une activité dont le but est de communiquer le contenu de conscience d’un individu à l’autre” (p. 23), there is besides a difference also a close relation between linguistics, which studies that “activity”, and psychology, which studies “le contenu même de la conscience humaine”. We even find a remark such as: “comme la linguistique en général, la grammaire fait en elle-même *partie de la psychologie* ... Les faits grammaticaux sont des faits *psychologiques*” (p. 25).

On the other hand, as early as 1928 Hjelmslev sees quite clearly that the facts of grammar should not be confused with purely psychological facts. The object of linguistics, he says in the same book, is not “la conscience elle-même” but the means of imparting the “contenu de la conscience, c’est à dire *l’expression*”. (p. 26). But on the next page again we find Steinthal quoted and: “Ce sont les *images* des idées et non les idées mêmes qui font l’objet de la grammaire”. Which sentence is immediately followed by: “Or, c’est la distinction des idées purement psychologiques et des idées grammaticales qui importe”.

Hjelmslev also stresses the importance of *form* in his *Principes*, quoting de Saussure and concluding that this is an infallible criterion for what belongs to grammar and what does not belong to it: “Une catégorie qui n’est pas fondée sur des *critériums de forme* ne saurait pas lui appartenir” (p. 28). In this book, too, Hjelmslev urges the establishment of an immanent study of grammar, which he calls the *inductive* method and which should take as its point of departure only the *facts* of language “... en ignorant ... toute catégorie qui ne se révèle pas immédiatement dans *l’expression* linguistique” (p. 42). But on the same page we find the chapter “Grammaire psychophysiologique”, beginning with the statement that “le langage comporte uniquement des faits d’ordre *psychologique*”. Because linguistics studies “les reflets extérieurs des faits psychiques” it is a kind of indirect psychology, it is one of the essential aspects of *psychophysiology*. (p. 46).

publications. It is curious, therefore, to read an extensive Spanish Introduction to Linguistics of 1953 which is based on the “*Principes*” and praises Hjelmslev for views and statements which he has changed or taken back long ago; see: Antonio Llorente Maldonado de Guevara, *Los “Principios de Gramática General” de Hjelmslev y la Lingüística. Introducción a la Ciencia del Lenguaje*. Colección Filológica V de la Universidad de Granada 1953. For those who wish to become acquainted with Hjelmslev’s theory the Spanish book is of historical interest only.

We see in these first fifty pages of the *Principes* the struggle of their author to establish linguistics as an independent science, resulting as yet in no more than the demarcation of linguistics as a clearly marked-off branch of science with its own laws and methods, but still as a branch of the science called *psychology*. The struggle continued, until in 1935 we find Hjelmslev stating: "If it is true that language is a social institution, existing outside and independently of the individuals, it must follow that it cannot be defined as a psychological phenomenon" ¹⁾.

The next year it even seems as if the tables have been turned completely, when in *Sprog og Tanke* Hjelmslev writes that the concept cannot exist before the word, nor thought before language. The concept presupposes the word, thought presupposes language as its indispensable basis. In relation to thought language is primary: it is language that articulates thought, divides it into parts, outlines and defines its concepts ²⁾.

The best view of this difficult problem is no doubt the way Sapir describes it already in 1921, when he speaks of the "*interaction* of language and thought": ... "the instrument makes possible the product, the product refines the instrument. The birth of a new concept is invariably foreshadowed by a more or less strained or extended use of old linguistic material; the concept does not attain to individual and independent life until it has found a distinctive linguistic embodiment. ... As soon as the word is at hand, we instinctively feel, with something of a sigh of relief, that the concept is ours for the handling" ³⁾.

2. *Process and system.*

Hjelmslev poses as a generally valid thesis that for all fluctuation, for every process, ("forløb") there is a constant, a corresponding system by which the process can be analyzed and described by means of a limited number of premisses ⁴⁾. He

¹⁾ *On the Principles of Phonematics*. Proceedings II Intern. Congr. of Phonetic Sc., London 1935, p. 49.

²⁾ *Sprog og Tanke*, Sprog og Kultur, 1936, p. 32.

Cf. p. 146ff. of the present, where the problem is dealt with more in extenso.

³⁾ Edw. Sapir, *Language*, New York 1921, p. 16, 17. Cf. also L. Weisgerber, *Muttersprache und Geistesbildung*, 1941, p. 125, and *Das Gesetz der Sprache*, 1951, p. 24 ff.

⁴⁾ Cf. Uldall on psychology: "... it may be that it will never be possible to amass sufficient data on any one specimen (viz. of the human mind) to predict behaviour in detail with a high degree of probability ... but such knowledge is at least theoretic-

assumes this not only for language but he takes "process" in its widest sense, e.g. the "process" of historical events. Literature and art are also "processes". For the disciplines of history, literature and art, too, he believes a systematization should be possible.

Hjelmslev assumes that a process can always be analyzed into a limited number of elements constantly recurring in different combinations. On the basis of this analysis the elements could be ordered in classes of similar possibilities of combination. And not only could they thus be set into a system and could a "systematic" description of them be given, but *conclusions* might be drawn from these systems as to other elements, even those not yet in existence: "a general and exhaustive *calculus of the possible combinations*" could be set up (OSG p. 10). This "predicting" of what may and what can never occur Hjelmslev holds possible not only for language but also for the other disciplines mentioned. In history, e.g., we must be able to find in the end the forces that have directed the events through the centuries and caused them to happen in the way they did and not otherwise, and thus we must in the end be able to foresee all events and to establish under what conditions they are bound to occur: "A history so established should rise above the level of mere primitive description to that of a systematic, exact, and generalizing science, in the theory of which all events (possible combinations of elements) are foreseen and the conditions for their realization established" (OSG p. 10) ¹⁾.

Whether this will be attainable or not depends, according to Hjelmslev, solely on the truth of the thesis that there is a system underlying every process. This, therefore, is the first thing that will have to be proved. And it is language especially that lends itself as an object on which it can be demonstrated. Scholars of all times have been trying to discover a system behind the process of language (the text), a phonetic system, a semantic system, a

cally possible even now, and it is therefore no longer reasonable to regard "human nature" as a completely incalculable factor which will inevitably stultify any attempt to make the humanities respectable". (p. 2 *Outline*). The "respectability" of a science would then seem to depend on the extent to which the science in question is able to reduce its object to "a combination of quite ordinary, calculable factors". (ibid).

¹⁾ The comparison is lame in so far as a *process* (history) is equalled to a *system* (language). Foreseeing all historical events would compare with predicting what people are going to say at a certain moment.

grammatical system. Their attempts have been vague and subjective so far, owing to their transcendent aims, but Hjelmslev wants to test the thesis as a working hypothesis on language by an immanent study. If the attempt succeeds for language, this means, according to him, that the principle is generally practicable and corresponding experiments could be performed in "the other fields of the humanities", thus on history etc. ¹⁾.

When Hjelmslev says that a process is unimaginable without a system behind it, he does not mean that the system should be immediately accessible for observation, but that "the existence of a system is a necessary premiss for the existence of a process: the process comes into existence by virtue of a system's being present behind it, a system which governs and determines it in its possible development ... On the other hand, a system is not unimaginable without a process; the existence of a system does not presuppose the existence of a process. The system does not come into being by virtue of a process's being found" (OSG p. 36).

Garvin observes that this is the most lucid passage he has ever seen in the recent literature in reference to what he calls "the 'hocus-pocus' versus 'God's truth' discussion" (*Review OSG* p. 75). This is the discussion around "the status of the inference of a linguistic system on the basis of observed speech behaviour or written records (Hjelmslev's 'text' and 'substance'), viz. whether this inference is based on the linguist's judgment only, or whether it is implicit in the data themselves" (*Review OSG* p. 83). Since Hjelmslev holds the ontological primacy of form and of system it is clear that the second should be his point of view. That his actual method of linguistic analysis (finding^a), when applied to real language phenomena, so often makes the impression that the system he infers "is based on his own judgment only" is another point, which will be discussed in Chapter XI. The linguistic question which may arise after these opening chapters of OSG concerns the part in which Hjelmslev speaks of the recurrence of the elements in a process:

How do we know that in a certain case we have to do with a "*recurrence*" of a previously found element and not with a *new* sound, e.g., which we hear for the first time? How will it be possi-

¹⁾ OSG p. 11. See Uldall's attempt at an algebraic description of a non-linguistic field of the "humanities", quoted on p. 96.

ble to find out where the lines between the various elements of the process are to be drawn? In other words: how can we distinguish the elements from each other? In a spoken text, for instance, there is an endless variety of sounds in an unbroken series; the sounds that resemble one another might be said to form together a "class", but there is not only an infinity of sounds in one such a class, there is also an infinity of such classes so that they could not be arranged but artificially. (Cf. E. und K. Zwirner: *Grundfragen der Phonometrie*, Phonometrische Forschungen Bd. I Reihe A). *How* can we arrange them ¹⁾?

Hjelmslev solves only part of this problem.

He does tell us how to recognize the relevant sounds in speech: "Der Sprachlaut", he says, "kommt in der Weise zustande, dass der phonetisch gegebene Lautstoff von der Sprache einer Formung unterworfen wird, indem in die Lautwelt gewisse sprachlich relevante Grenze eingelegt werden ... Die Erkenntnis des Sprachlautes geschieht also durch eine Abstraktion, indem man aus dem phonetisch gegebenen Stoff gewisse Momente ausscheidet, welche für die sprachliche Form irrelevant erscheinen, und indem man gewisse andere Momente als relevante annimmt, und diese als genus proximum und differentia specifica zu definitionsmerkmalen des Sprachlautes erhebt. Man bedient sich bei dieser Analyse ... des "Prinzips der abstraktiven Relevanz", indem der Sprachstoff als Substanz auf die Sprachform bezogen wird" ²⁾. This shows that Hjelmslev realizes very well that he who wants to analyze a spoken text must have some sense of the sound-"system" behind that text, or he will not recognize "the same" sounds anywhere.

Hjelmslev also tells us how to find the relevant speechsounds of a language, viz. by what he calls the 'commutation test'. This commutation test will be discussed in detail in Ch. IX. In short it consists in finding out whether "the replacing of one of the symbols by another is capable of entailing a ... change of *meaning*" ³⁾. If it does, we have two different symbols, e.g. 'thick, kick, lick'.

¹⁾ See Miss Fischer-Jørgensen's discussion of the problem in *Phonemics*, Archiv f. Vergl. Phonetik, V, 1951, p. 170-200. (Esp. p. 23, 24 English translation).

²⁾ L. Hjelmslev, *Über die Beziehungen der Phonetik zur Sprachwissenschaft*. Archiv f. Vergl. Phonetik II, 1938, p. 132.

³⁾ Hjelmslev, *The Syllable as a Structural Unit*, 1938, Proceedings of the Third International Congress of Phonetic Sciences, 1938, p. 266-272.

But *how* do we discover whether the replacing of one symbol by another entails a "change of meaning"? This is the question Hjelmslev does not answer. The answer is to be found in the function between the expression and its content: the sign-function. Hjelmslev realizes that "... If in analyzing the text we omitted to take the sign function into consideration, we should be unable to delimit the signs from each other and to divide the individual sign into its constituent *figurae* (p. 29), and we should simply be unable to provide an exhaustive (and therefore, in our sense of the word, empirical) description of the text accounting for the functions that establish it. We should simply be deprived of an objective criterion capable of yielding a useful basis of analysis" (OSG p. 45, 46).

This is all. Hjelmslev does not explain how it is possible for us to work with the sign function. "How do we know" — one might ask with Reichling — "that certain sounds make up the form of e.g. a certain word?" The answer must be: because the word-*'gestalt'* in which we know those sounds forms, with the meaning, a unit we *know*. In the *'gestalt'* *c-a-t* we recognize the form *c-a-t* because we use the word *cat* to talk about a cat ¹⁾).

Although this element of *knowing the language analyzed* is nowhere mentioned explicitly by Hjelmslev, yet it is inherent in his commutation theory and is, as we shall see, the basis of all his *exclusively formal* premisses. It is part of what I have called the *'setting'* of glossematic analysis (See p. 27): Hjelmslev does not mean his analysis to be applied to hitherto unknown languages, not even to hitherto unanalyzed languages. "*Process*", in the quotations from Ch. II in OSG is, as Professor Hjelmslev kindly told me, to be understood as "*analyzed process*". That is, as a process whose elements have already been distinguished and recognized (by commutation evidently). Finding^a (see p. 23) is supposed to have taken place already. What we have to do next is arrange the elements thus found, after their possibilities of combination, after which Hjelmslev's analysis in the sense of finding^b and finding^c is supposed to take place. The analysis described in Ch. II OSG is the final controlling analysis, meant to give a systematic *survey* of a language analyzed beforehand by "trial and error" and collecting the various disconnected facts found by

¹⁾ *Het Woord* p. 229. Translation mine.

the earlier analysis and arranging them systematically into a whole, into a unity of higher order.

3. *Linguistic theory and empiricism.*

Every theory must answer the requirement of *empiricism*: the theory must be capable of yielding, in all its applications, results that agree with experimental data. It will do so, says Hjelmslev, if it satisfies the following three requirements, given here in the order of their relative importance:

1. The theoretical description must be free from contradiction (self-consistent).

2. It must be exhaustive.

3. It must be as simple as possible ¹⁾.

Hjelmslev considers this to be an entirely new principle in the field of linguistics. He says that it "at once clearly distinguishes true linguistics from all previous undertakings of linguistic philosophy" — meaning by this term "linguistic philosophy" *all* previous theoretic linguistics ²⁾.

Together these three requirements form what Hjelmslev calls the *empirical principle* ³⁾. He feels that the name is open to some objections: "We venture to call this principle the empirical principle. But we are willing to abandon the name if epistemological investigation shows it to be inappropriate" (OSG p. 12). Also Eli Fischer-Jørgensen thinks this a "somewhat peculiar terminology" ⁴⁾. The reason for it, she says, is that Hjelmslev "prefers this formalistic definition of "empirical" to avoid metaphysical ideas such as "truth" and "reality" " ⁵⁾.

In fact, this is the third meaning we find attached to the word "empirical" in Hjelmslev's works. It is not the first time that he stresses the importance of empiricism in linguistic investigation.

¹⁾ Uldall derives from the ideal of simplicity all the other scientific ideals of objectivity, self-consistency and exhaustiveness because a description answering those requirements will always be simpler than one that fails to fulfill one of them. (*Outline* p. 20).

²⁾ E. Fischer-Jørgensen, *Review OSG*, p. 81.

³⁾ OSG p. 12: "The description shall be free of contradiction (self-consistent), exhaustive, and as simple as possible. The requirement of freedom from contradiction takes precedence over the requirement of exhaustive description. The requirement of exhaustive description takes precedence over the requirement of simplicity".

⁴⁾ "En noget ejendommeligt terminologi" (*Review OSG*, p. 84) Cf. also A. Martinet in BSLP 42, 1946, p. 36 on this principle, "que Hjelmslev appelle curieusement le principe d'empirisme".

⁵⁾ Eli Fischer-Jørgensen, *Danish Linguistic Activity 1940-48*. LINGUA II, 1, 1949, p. 99.

In his first few works Hjelmslev uses the term "empirical method" in its ordinary sense, as more or less an equivalent of what in other places he calls "the immanent method", and as meaning the opposite of "aprioristic method"¹). In *Principes* we read that for his analysis he wants "se placer, d'une manière *empirique*, sur le terrain du langage même" and then wants to see what belongs to language and what does not (p. 5)²). In Ch. 9 of the same book, entitled *Grammaire inductive et empirique*, we read that „la linguistique proprement dite ne peut jamais être une science *apriori*" (p. 39). Also in *La Catégorie des Cas* (1935)³) Hjelmslev calls the immanent method: "une méthode exclusivement linguistique qui se borne à chercher, par un procédé *empirique*, les catégories reflétés directement dans la langue. . . ." (p. 50).

Also in 1939 (*La Structure Morphologique*)⁴) "méthode empirique" is opposed to "méthode apriorique" (p. 66), but here it is taken in a more specialized sense, as an equivalent of "méthode fonctionnelle" and defined as: "la méthode qui se place de prime abord sur le terrain des *fonctions* et les prend pour norme de toutes les classifications" (p. 69). „Pour reconnaître une structure il faut prendre (les dépendences) pour norme de toutes les classifications". This, says Hjelmslev, is what we call the *empirical* method. Every other method is aprioristic.

Thus we find the following three meanings attached by Hjelmslev to the word "empiricism":

- a) Observation of the *facts* of language, *immanent* study.
- b) Observation of the *functions* in language.
- c) Fulfilment of the three requirements of self-consistency, exhaustiveness and maximum simplicity.

The objection to the use of the word concerns the third case in particular. The *Concise Oxford Dictionary* gives for '*empiric*':

¹) See for a short critical description of the development of Hjelmslev's views on this point also: Knud Togeby, *Structure immanente de la langue française*. TCLC VI, 1951, p. 12, 13, 75, 81. Togeby is of opinion that Hjelmslev still makes too much use of substance for his analysis and his classifications. And "une telle analyse de la substance dépasse les cadres d'une analyse immanente conséquente" (p. 13). Indeed Hjelmslev makes use of the substance; but contrary to Togeby's criticism of this point I do not think the substance should *not* be made use of, it should only be recognized *that* it is made use of.

²) *Principes de Grammaire Générale*, Det Kongelige Danske Videnskabernes Selskab, Historisk-filologiske meddelelser, XVI, 1. København, 1928. Italics mine. Cf. de Saussure: "il faut se placer de prime abord sur le terrain de la langue et la prendre pour norme de toutes les autres manifestations du langage" (*Cours* p. 25).

³) *La Catégorie des Cas*, Acta Jutlandica VII, 1935. Italics mine.

⁴) *La Structure Morphologique* (Types de Système). Rapports V Congrès International des Linguistes, 1939, p. 66-93.

'Based, acting on observation and experiment, not on theory, ... relying solely on experiment'. So Hjelmslev's ideal of an immanent linguistics based on an observation of the *facts* of language might justly be called his *empirical principle*. It is indeed the fundamental requirement of true linguistics. And as the difference between *a*) and *b*) does not exist in Hjelmslev's way of thinking because to him the *facts* of language consist in *functions only*, it is understandable that he should use the word 'empirical' also for *b*): the observation of the *functions* in language.

But as for *c*), I agree with Fischer-Jørgensen and Martinet that the name 'empirical' is curious. Of course Hjelmslev means to say that the three requirements mentioned there *can* only be satisfied by an empirical method of observation of the facts of language. This is true, and in so far the name might even be considered appropriate for *c*). But can we turn it round and say that only the empirical method sets itself the task of satisfying these three requirements? I would ask with Fischer-Jørgensen if they are not "what *all science* has striven after, though with varying success, so that the difference should rather be that glossematics comes nearer to the ideal" ¹⁾. If there is anything that makes glossematic theory "at once clearly distinguishable from all previous undertakings of linguistic philosophy" (OSG p. 12), it is not the requirements of *c*), but the requirement of an *empirical* method, taking only the observation of the facts of language — and then understood as its functions only — as a point of departure. The requirements of *c*): self-consistency, exhaustiveness and maximum simplicity are additional requirements, very important ones it is true, but additional requirements in any method and for any science. They have been striven after by all previous "linguistic philosophy" and are not exclusively confined to the empirical method.

¹⁾ Eli Fischer Jørgensen, *Review OSG*, p. 84: "Men det er dog et spørgsmål, om det ikke har været det, al videnskab har stræbt imod, om end med mere eller mindre held, saa at forskellen snarere skulde ligge i, at glossematiken naar naermere til idealet".

CHAPTER II

INDUCTION AND DEDUCTION

Linguistics has always been *inductive*, as Hjelmslev calls it, by which he means that it has always applied a method passing from something particular to something general in its formation of concepts: from the individual sounds to the phonemes (classes of sounds), from the individual phonemes to the categories of phonemes, from the individual meanings to the general or basic meanings, and from these to the categories of meanings. It was a progression from *segment* to *class*, not from class to segment, a synthetic, not an analytic movement.

The concepts thus obtained cannot be generalized beyond the individual language and afford no useful basis of comparison. All our inherited terminology suffers from this: the inductively obtained class concepts of grammar, such as "genitive", "passive" etc., are striking examples. Of none of them can a general definition be given: in one language, Latin for example, a genitive is something quite different from the genitive in another language, say Greek. Induction, says Hjelmslev, does not lead from fluctuation to a constant, (see Ch. I) but to accident, it cannot ensure a self-consistent and simple description.

We ought, therefore, to carry out our analysis in the opposite direction, according to Hjelmslev. He thinks that when we start from experimental data we will get exactly the opposite procedure: "If the linguistic investigator is given anything ... it is the as yet unanalyzed *text* in its undivided and absolute integrity. Our only possible procedure, if we wish to order a system to the process of that text, will be an analysis, in which the text is regarded as a class divided into segments, then these segments as classes divided into segments, and so on until the analysis is exhausted". This procedure is "a progression from class to segment, not from segment to class, ... an analytic and specifying, not a synthetic

and generalizing movement, ... the opposite of induction". Hjelmslev calls this *deduction* (OSG p. 13).

By "*text*" as used in the above quotation we should understand everything we 'possess' of a language, all utterances etc. (cf. p. 19 note 2). But on the other hand the text is to be thought of as limited, hence the use Hjelmslev makes of a special method of filling up the gaps that may occur, viz. catalysis (See Ch. X).

Very interesting in connection with what was said above as to a "process", viz. that Hjelmslev understands by it a process already analyzed somehow (Cf. p. 37), is what he says here about the *text*. It might be expected that in speaking of the "process" of a text Hjelmslev also meant: an *analyzed* textual process, thus, a text already analyzed in some way, by trial and error — to which a system is to be ordered by describing the various relations between the elements. But — in the above quotation we find the express statement that the only thing that is given the linguistic investigator is "the as yet *unanalyzed text*". The only way to fit this into the rest is to take the term "*un-analyzed*" in the sense of "*not yet analyzed by Hjelmslev's final controlling analysis*", and not in the sense most readers would give it: a text never yet analyzed, of which we do not know where one sentence or word ends and another begins.

This final analysis, then, Hjelmslev calls a *deduction*, adding: "This usage disturbs epistemologists, but we retain it here since we believe we shall later be able to demonstrate that the terminological opposition on this point is not insuperable" (OSG p. 13).

It surely is not the epistemologists only that are disturbed by this usage of the word 'deduction'. On p. 16 I mentioned Hjelmslev's use of this word as a striking example of a change of terminology and of principle. The different usages of this term cause confusion to everyone who reads more than one of Hjelmslev's works.

If we follow, Hjelmslev's usage of the terms 'inductive' and 'deductive' from the beginning, we start with his first book, *Principes*. To facilitate reference the various quotations given will be numbered. The italics are mine. In *Principes* (1928) we find in Ch. 9, already mentioned, entitled "Grammaire inductive et empirique", the following (p. 39):

I. "Les catégories qui constituent le système de cette science (la linguistique) doivent s'établir selon une méthode *inductive*".

II. "La méthode inductive est une condition indispensable pour pouvoir dégager la vérité grammaticale. En se plaçant en dehors du terrain même de la linguistique afin d'établir des catégories grammaticales, on se servirait . . . d'une méthode de *déduction*. Mais la linguistique proprement dite ne peut jamais être une science *a priori*" (p. 39).

III. "Mais les classifications ne sont pas nécessairement des constructions pures de l'esprit spéculatif. Elles peuvent être des constatations pures et simples, dégagées par une méthode *inductive*. La méthode *inductive* nous semble donc la seule possible en grammaire . . . en ignorant toute catégorie qui ne se révèle pas immédiatement dans l'expression linguistique" (p. 42).

IV. From the investigation of the *facts* of language Hjelmslev wishes to draw principles which are "susceptibles à *diriger* les recherches" (p. 41). Yet:

V. "Les principes ne doivent *jamais fournir le point de départ*, mais, tout au contraire, *le but extrême des recherches* . . . Les prendre comme point de départ ne servirait qu'à fausser continuellement le jugement" (p. 41).

VI. We must collect and compare as many isolated facts as possible; this is the first step, the means; the widest possible generalization is the real aim (p. 106). In collecting the facts there is a great danger of a superficial method, but "le danger d'une méthode *déductive* est plus grande encore" (p. 107).

In *Principes*, then, the meanings attached to the words 'induction' and 'deduction' are:

Induction: a) The method basing itself on the *facts* of language, seen as the facts of *expression*; more or less equivalent of 'empiricism'. (I, II).

b) The method of analysis that passes from the individual facts to the general principles, a *generalizing* movement (III, V, VI). Note, however, the remarkable words in IV, foreshadowing principles we find in OSG, c.f. the present, p. 46, 48.

Deduction: The method placing itself *outside* the field of language in order to establish grammatical categories; more or less equivalent to 'apriorism' (II).

In 1936 the terms are used in the same sense in *Synopsis of an Outline of Glossematics* by L. Hjelmslev and H. J. Uldall. Here language is conceived of as consisting of three concentric parts: the *system*, which is the central part, the elements arranged in a pattern of mutual relations; the *norm*, which is a set of rules based on the system and fixing the limit of variability for each element; the *usage*, which is a set of rules based

on the norm and fixing the limit of variability tolerated in a given community at a given time; this limit is based on social conventions. In this connection the word *inductive* is used:

"The glossematic system is found *inductively* through a series of ascending abstractions: an empirical study of the practice leads to the recognition of the usage, a study of the usage to the recognition of the norm, a study of the norm to the recognition of the system. Thus glossematics is *inductive* and this *induction* is followed by a *deduction* which is nomology" (p. 3). (Nomology = the theory of usage and practice, the branch of linguistics which treats of the *substances* formed in the glossemes (substance of thought-content, substance of expression) as opposed to glossematics which is the theory of system and norm). The meanings here attached to the words 'induction' and 'deduction' appear to have concentrated on what seemed only to be a secondary meaning in *Principes*:

Induction: the method of progressing through a series of ascending abstractions to find elements of the greatest possible abstraction (the system), so a progression from the particular to the general.

Deduction: the method following glossematic analysis, which furnishes us with the theory of usage and practice, apparently seen as passing from the general to the particular, the limits fixed by usage and practice being narrower than those fixed by the norm; thus English norm allows various pronunciations of the element *r*, while each usage (Scottish, Northumbrian, Southern English etc.) demands one particular variety (p. 2).

In *Recherches Structurales* (1949), 1936 is given as the year of publication of the *Synopsis*, yet the *latter* seems more congruent with the *Principes* of 1928 in its general theory than *La Catégorie des Cas* which was published in 1935 ¹). The reason may be that Hjelmslev was not the only author of the *Synopsis* or that it may have been made ready for publication earlier than *Cas*, in any case we find in the latter passages that differ from *Principes* and *Synopsis* and correspond much more closely with Hjelmslev's later work than the *Synopsis* does. We might say that in *Cas* we see Hjelmslev on his way from 'induction' to 'deduction', until in 1939 'deduction' is reached (these terms taken in the sense of OSG ²). This will become clear from a

¹) L. Hjelmslev, *La Catégorie des Cas*, Acta Jutlandica VII, 1935, (*Cas*).

²) Nevertheless the work still induced Trager to the following remark in his review of it: "For Hjelmslev, linguistic categories are epistemological categories, and linguistic 'concepts' are of the same kind as logical concepts" (Language 17, 1941, p. 172-174).

The idea "to determine the 'Gesamtbedeutung' of each case of a case-system" is rightly criticised by Hockett (quoted here) in his *Review of Recherches* (p. 95) and by Vogt (*L'étude des systèmes de cas*, *Recherches* p. 112-123).

number of quotations from *Cas*. (It should be borne in mind that instead of 'cas' we may read 'forme linguistique' as appears from quotation I):

I. "Un cas, comme une forme linguistique en général, ne signifie pas plusieurs choses différentes; il signifie une seule chose, il porte une seule notion abstraite dont on peut *déduire* les emplois concrets" (p. 85). This abstract notion is what constitutes its 'value', and:

II. "Cette valeur ou signification fondamentale est *trouvée par une comparaison des emplois* auxquels se prête le cas en question et par une considération des oppositions qu'il contracte dans le système" (p. 85). But:

III. "La valeur d'un cas n'est pas identique à la somme des emplois qu'il contracte dans l'usage. La valeur... est le minimum différentiel de signification qui *rend possible* les emplois constatés et très souvent certains autres emplois encore" (p. 88).

IV. We should not "isoler les divers emplois contractés par une . . . unité sans *établir la signification fondamentale* dont ils *émanent*"; if we do, we practise „scission extra-linguistique". Instead of that, . . .

V. "... *les emplois doivent être expliqués par la valeur*; la valeur de chaque cas doit être définie par son rôle dans le système casuel; la catégorie casuelle doit être en dernière analyse expliquée par son rôle dans le système d'ensemble de la langue" (p. 87).

VI. The system must be "*à la fois* le point de départ *et* le but dernier des recherches" (p. 87).

The words 'induction and 'deduction' do not occur in *Cas*. Instead of what he formerly called the 'deductive method', Hjelmslev now uses the term 'scission extra-linguistique', i.e. the method of transcendental linguistics.

These quotations contain many noteworthy remarks. The only difference from the *Principes* seems to be that between quotation VI of *Cas* and V of *Principes*. The reader will, however, note the strange correspondence between *Cas* VI and *Principes* IV, and discover that the latter sentence contradicts what is said in *Principes* V, though a quotation from the same page (41).

In the quotations given from *Cas* the author does not express himself on the method of analysis, but knowing in which direction it is developed in Hjelmslev's later works, the observant reader can find some indications of method implied. Indications which as yet point to a mixture of what Hjelmslev later understands by 'induction' and 'deduction': *Induction* when he says that the value of a case is *found* "*par une comparaison des emplois* auxquels se prête le cas en question" (II a), and in IV in so far as he wants to "*établir . . . la signification fondamen-*

tale" from "les divers emplois contractés par une unité" (IV), and in VI b. *Deduction* seems to be implied in I: "une notion abstraite dont on peut *déduire* les emplois concrets", in IIb where he says that the value or "fundamental signification" is found by a comparison of the various usages, "et par une *considération des oppositions qu'il contracte dans le système*". The deductive method seems to be required also according to III, and especially by V: . . . les emplois *doivent être expliqués par la valeur*", also by VI a: the system should be "le point de départ des recherches" besides their last goal.

It was said above that this transitional character of *Cas* as regards method is shown up especially in a comparison with Hjelmslev's later works. After the quotations now following I shall mention the numbers of the quotations from *Principes*, *Synopsis* and *Cas* to be compared with them, putting + when there is agreement, — when there is disagreement between them. It will be seen that those from the first two works have mostly —, but those from *Cas* now +, now —.

In 1939, in *La Structure Morphologique*¹), Hjelmslev has entirely discarded the inductive method:

I. "Les formes grammaticales et leurs significations constituent dans toute langue une hiérarchie qui ne se dégage que *déductivement*" (p. 69). "La définition sémantique de n'importe quelle forme grammaticale présuppose toute une procédure *déductive* et irréversible qui ne connaît que son propre ordre et à laquelle il n'y a qu'une seule entrée possible" (p. 69). (Compare *Principes* I —, II —, *Cas* V +).

Hjelmslev now stresses the importance of a "deductive empirical method" saying that a semantic value is never to be found by *inductively* collecting all particular significations and then concluding "du particulier au général" . . . "car l'induction reste par définition incomplète. Impossible de savoir si la collection est complète ou non" (p. 83). Therefore "on ne possèdera jamais la totalité du particulier sans se placer dès l'abord sur le point d'Archimède fourni par le général" (p. 84). (Compare *Princ.* VI —, *Cas* I +, IIa —, IIb +, V +).

III. "Une valeur sémantique . . . ne se reconnaît pas par les significations particulières; une valeur ne se reconnaît que par son opposition à d'autres valeurs, et l'opposition à son tour est en vertu de sa catégorie et s'explique par elle seulement" (p. 83). (Compare *Princ.* VI —, *Cas* IIa —, IIb +, III +, V +).

IV. Therefore it is impossible, Hjelmslev decides now, to conclude inductively from the 'parole' to the 'langue', from the

¹) L. Hjelmslev: *La Structure Morphologique (Types de Système)*. Rapports V Congrès Intern. des Linguistes, 1939, p. 66–93. (*Struct. Morph.*).

'usage' to the 'norme'; in the 'usage' the "latitude de variabilité" is always smaller than in the 'norme', and a 'usage' is always only a realisation of certain possibilities, not of all (p. 83, 84). Consequently "La méthode déductive exige que l'étude de la norme précède celle de l'usage" for "la méthode déductive exige qu'on part des termes les plus généraux possibles" (p. 90 and 87 resp.). (Compare the quotation from *Synopsis* —, and *Princ.* VI —, *Cas* I +, IIa —, IIb +, III +, V +). In Ch. 2 of *Structure Morphologique*, entitled *Méthode inductive et déductive*, Hjelmslev points out that the distinction between induction and deduction should not be confused with that between empiricism and apriorism. Classical linguistics was also empirical, it recognized "les évidences qui crèvent les yeux", but it used an, in principle, inductive method. An aprioristic method can be deductive and vice versa; only the empirical deductive method is adequate (p. 83).

In this work, then, the terms 'inductive' and 'deductive' are used again, and in the same sense as in *Synopsis*, which is also the meaning attached to them in many passages in OSG:

Induction: A progression from the particular to the general, from segment to class, a synthetic, generalizing movement.

Deduction: A progression from the general to the particular, from class to segment, an analytic, specifying movement.

However, in Ch. 9 OSG we find the word *deduction* used in a more specified sense than hitherto. In Ch. 9 it appears to be "a continued division", a "continued partition", a "partition complex" or according to the formal definition on p. 29 "a continued analysis or an analysis complex with determination between the analyses that enter therein", i.e. an analysis complex in which each analysis introduced premises the preceding analysis and is premised by the next analysis. Further down on the same page, however, 'deduction' seems to be simply opposed to 'synthesis': "a procedure can, then, . . . either consist of analyses and be a deduction, or, on the other hand, consist of *syntheses* and be an *induction*". Induction is then "a continued synthesis with determination between the syntheses that enter therein". Besides all this, it is still possible, says Hjelmslev, to continue using the word 'deduction' in its ordinary sense of 'logical conclusion', for "propositions that follow from other propositions can in our sense be said to *proceed from them by an analysis*: conclusions are at each step objects that depend uniformly on each other and on the premisses". Hjelmslev admits that this in its turn conflicts again with "usual ideas about the concept of analysis" but he does not want to postulate anything about the *nature* of the analysis. On the other hand 'induction' should *not* be used in its ordinary sense, denoting "a special kind of logical argument from certain

propositions to others, thus denoting, in logical terminology, a kind of deduction" (OSG p. 30) — even Hjelmslev thinks this would be confusing; but he hopes his definitions will "prevent this ambiguity from disturbing the reader".

We see that at first Hjelmslev advocated an *inductive* linguistics, understanding by it:

I. a) A linguistics basing itself on the *facts* of language, not introducing any principles from *outside* (*de*-duction), but placing itself *inside* language (*in*-duction).

b) A progression from the particular fact to the general, the more abstract, the system.

II. Then, maintaining the importance of an immanent linguistics (Ia), the method to find the system (Ib) is changed: instead of progressing from individual phenomena and generalizing them to a system, Hjelmslev now wants to start from the general and thus find all the individual facts. This change is expressed in a different term: Hjelmslev now advocates a *deductive* linguistics.

*This is how the unwarned student reads the various works quoted here*¹⁾. Although many of the contradictions in them will always remain contradictions, a reminder of the 'setting' of glossematic analysis may help to clear up some of the more obscure points. (See p. 27 ff.).

Yet this is not the last stage of the development in the glossematic usage of the terms. The last stage seems to be that they are completely abandoned as linguistic terms. Hjelmslev recently said that it would be preferable to read for *induction* and *inductive*: *synthesis* and *synthetic*, and for *deduction* and *deductive*: *analysis* and *analytic*. Thus there would be a change in the following sentence in OSG, for instance: "A procedure can, then, ... either consist of *analyses* and be a *deduction*, or, on the other hand, consist of *syntheses* and be an *induction*" (OSG p. 29). This should now read: "A procedure can, then, ... either consist of *analyses* and *start from larger units*, or, on the other hand, consist of *syntheses* and *start from smaller units*"²⁾.

¹⁾ Guevara is one of those who, not knowing of the setting of *later* glossematic theory, is puzzled by Hjelmslev's insistence on deduction, as appears i.a. on p. 32 of *Los "Principios ..."* etc., where he quotes "*La Structure Morphologique*" (1939).

²⁾ In his latest article Hjelmslev speaks of "une procédure analytique (dite aussi déductive, d'un terme qui s'est montré prêter à l'équivoque)" (*La stratification du langage*, Word 10, No 2-3, 1954, p. 164).

The terms 'inductive' and 'deductive' are only retained now in their *logical* sense; *deduction* being used to denote a special kind of logical argument from certain propositions to others, a *logical conclusion*. It is retained, for instance, where Hjelmslev says that linguistic theory "constitutes ... a purely deductive system in the sense that it may be used alone to compute the possibilities that follow from its premisses" (OSG p. 14).

Here "*deductive system*" means, as Prof. Hjelmslev kindly informed me, a deductive *hypothetical* system, starting from the general, e.g., from a general definition of language.

One who reads OSG for the first time is puzzled by another question in these passages, a question which must have arisen already in Ch. 2, where it is said that "for every process there is a corresponding system, by which the process can be analyzed and described" (p. 10 OSG). From this the reader will naturally have concluded that we need the system to analyze the process, as Hjelmslev also says in *Cas* p. 87: we must make of the system also "le point de départ ... des recherches". But — he will ask — how do we obtain that system which we need to analyze the text? Ch. 4 OSG gives the answer: ... *by analyzing the text*. Is this *induction* or *deduction*? It looks like a *circle*. The same circle as we see when reading that the system must be "à la fois le point de départ et le but dernier des recherches" (*Cas* p. 87).

The only way out of this apparent circle is what was said in the Introduction (p. 24): the various stages of the procedure of analysis have to be kept well apart. And the observations on p. 37 have made it clear that besides the three different acts of 'finding' enumerated before (p. 23) there are two different analyses to be distinguished all the time. The first analysis is the old one made by "trial and error", by which we find^a the various larger and smaller elements. After we have algebraically described their combinations and calculated ('found'^b) all possible combinations and thus established *the* language system, we confront every language anew with this system to describe it (= find^c its units) in an algebraic way. *This is the second analysis*, the glossematic analysis proper.

When we read the above again (and also the quotations on p. 42–48) with this in view, things become clearer. It appears that

in the first quotation from p. 10 OSG Hjelmslev means analysis no. 2. In the quotation given from Ch. 4 analysis no. 1 must be meant. In his earlier works, when he urged the 'inductive' method, starting by collecting as many particular facts of language as possible, analysis no. 1 and finding^a must have been referred to. Language presents itself to the observer first of all as a collection of particular facts, we are not conscious of the system behind it. Hjelmslev does not deny this. He takes it for granted, also in OSG. He just does not mention it. This has puzzled his critics. Vogt, for instance, writes that he would like to have an explanation of the connection between Hjelmslev's 'deductive' method and "les procédés que suit *en fait* le linguiste quand il se propose d'analyser et de décrire un langage jusqu'ici inconnue. Il doit nécessairement commencer par faire l'inventaire des éléments significatifs qui reviennent toujours identiques à eux-mêmes dans des combinaisons variés et dont le nombre est limité quelle que soit l'étendue des textes étudiés Avec cet inventaire à main, le linguiste est prêt à enregistrer et à analyser toutes les combinaisons où ils entrent, et il lui sera possible de cette manière de donner une description purement fonctionnelle et formelle du système linguistique supposé par le texte. *Je ne sais pas si c'est cette méthode que M. Hjelmslev qualifie d'inductive.* Parfois il semble bien lui-même supposer ce procédé (p. 10, p. ex.), ailleurs il semble supposer une analyse qui procède du tout inanalysé, établissant des classes du type "période", pour arriver ensuite aux "phrases", puis aux "mots"¹⁾. As must be the case with many readers of glossematic works, Vogt has mistakenly interpreted Hjelmslev's insistence in OSG that the linguist should start from the the unanalyzed text by dividing and subdividing it into classes and segments. This is in contradiction not only with the *Principes* but also with the description OSG itself gives of the first steps the linguist takes:

"From certain experiences, which must necessarily be limited

¹⁾ Hans Vogt, *Review OSG* 97, 98. The importance of the problem of identification, too, in this connection, is brought forward by Hans Vogt: the above quotation continues: "S'il veut par là décrire ce que fait le linguiste, je ne peux pas le suivre, car un tel procédé me semble absolument impraticable. S'il veut simplement indiquer que du point de vue logique l'analyse précède la synthèse, pas d'objections. Mais le procédé de fait, que j'ai indiqué sommairement, suppose que le linguiste identifie des éléments qui n'ont tous qu'une existence éphémère, *hic et nunc*".

even though they should be as varied as possible, the linguistic theoretician sets up a calculation of all the conceivable possibilities within certain frames. These frames he constructs arbitrarily: he discovers certain properties present in all those objects that people agree to call languages, in order then to generalize those properties and establish them by definition. From that moment the linguistic theoretician has — arbitrarily but appropriately — himself decreed to which objects his theory can and cannot be applied" (OSG p. 17).

We see here that the fundamental method, the first of all methods to be applied is *induction* (in the sense of OSG). It is the method with which all scientific investigation begins, progressing from the particular to the general, starting from "certain experiences", "limited" of course, selecting from these experiences "certain properties", and then "generalizing" these properties to construct thus, "arbitrarily", "certain frames". And these frames mark off the investigator's object. And when the investigator has calculated all the possibilities within these frames he has got the tools for describing or comprehending any given realisation of his object. Also Miss Fischer-Jørgensen wonders if on this point glossematics is so much different from ordinary linguistics, concluding that in any case the difference cannot be reduced to a simple formula such as "analysis" over against "synthesis", or "deduction" over against "induction":

"Up to now also previous linguistics has first found the separate entities from which a generalization was made, in a more or less complete textanalysis. And on the other hand there follows also in glossematics a synthesis after the analysis. And finally it should be added that, as Hjelmslev himself says, there go into the premisses for his theory a great many experimental data obtained inductively. Therefore it seems that the difference between glossematics and linguistics as practised hitherto cannot be reduced to such a simple formula as analysis over against synthesis, or deduction over against induction" ¹⁾.

Indeed the difference is another, as we shall presently see. After all is said and done I wonder if the whole difference between Hjelmslev's insistence on "induction" which we find in his earlier works, and his insistence on "deduction" in his later ones, could

¹⁾ E. Fischer-Jørgensen, *Review OSG* p. 85, translation mine.

not, very broadly, be viewed as a difference in the stage of analysis considered; if we could not say: in his earlier works Hjelmslev is concerned with the method of collecting the particular facts of language which are to be generalized and from which the premisses are to be drawn on which his linguistic theory, applicable to all language, is to be built up; whereas his later works should be seen as dealing with this theory itself, as dealing with the question as to what method will have to be applied to analyze any language once the general system of the whole of language shall have been established and by what method we could allot to each language its place in the system of the whole of language — the inductive method used to establish this general system being taken for granted: “Pour établir la grammaire générale il suffit de reconnaître le réalisable derrière le réalisé; *mieux encore: de déduire le réalisé en multipliant le réalisable avec sa condition*”¹). And this is where glossematics differs most from ordinary linguistics. Glossematics proper begins, as it were, where ordinary linguistics ends: at the discovery and the establishment of the features which are common to all languages, and which may therefore be considered characteristic of language. This is the goal which ordinary linguistics has always set itself and still sets itself to reach: to find the essence of language, that which sets it apart from all other phenomena, that on which its autonomy rests.

This is a difficulty that seems to be overlooked by glossematic theory. *What* are the features of language which glossematics will take as its basis, which it will recognize as essential and which it will generalize so as to form the “frames” of its object?

The linguist constructs these frames arbitrarily, says Hjelmslev (OSG p. 17); but this term “arbitrarily” is accounted for as follows: “he (the glossematician) discovers certain properties present in all those objects that people agree to call languages in order then to generalize those properties and establish them by definition”. Thus the applicability of the theory “will be studied

¹) L. Hjelmslev: *Struct. Morph.* p. 84. (Italics mine).

Haugen makes a practical observation in the following: “He calls this procedure *deductive*; but since he grants that the *inductive* method is solidary with the former, it can hardly make much difference whether one proceeds from the greatest to the smallest or vice versa, except for the fact that the latter is more feasible”. (*Review of Prolegomena*, IJAL 20, no. 3, 1954, p. 250).

by an investigation of each feature that may be said to be constitutive in the structure of any language, and by an investigation of the logical consequences of fixing those features with the aid of definitions" (OSG p. 18). The question the ordinary linguist sets himself to answer is now: *What* are those "properties present in all those objects that people agree to call languages"? *What* are those "features that may be said to be constitutive in the structure of any language"? Glossematics proper, however, starts from the assumption that they have been discovered ¹⁾. The English translation of the second quotation is more consistent here than the Danish original, whose formulation voices the *linguistic* question, it seems: "... an investigation of *what* features may be said to be constitutive in the structure of any language ..." ²⁾

No matter which version renders best the author's intention in this particular place, a fact is that the English is more in agreement with the author's general attitude throughout the book, up till one of the very last chapters. Almost at the end of the book it appears that Hjelmslev, too, has been looking for the answer to the *linguistic* question of what the characteristic properties of language are. And it appears there that he has indeed "discovered certain properties present in all those objects that people agree to call languages" which nobody before him had discovered. And the linguist will feel amply rewarded for his trouble when, after toiling through a mountain of terms and concepts so difficult to grasp, he inadvertently comes upon some statements on language which will no doubt prove to be of invaluable significance for all further investigation into its nature.

¹⁾ The reason may be that Hjelmslev always works with languages already known and analyzed.

²⁾ Translation mine.

CHAPTER III

THE THEORY OF LANGUAGE: A CALCULATION ARBITRARY, APPROPRIATE AND AS SIMPLE AS POSSIBLE

In trying to understand OSG we must not for a moment lose sight of two terminological peculiarities: what Hjelmslev understands by the words 'language' and 'theory' is different from what these words generally denote.

1. *Language*

The first term is also used in the ordinary sense, but more than one passage in glossematic works show that 'language', also called "natural language" ¹⁾ is actually only one area within the large field of what for glossematics is "language" and even "speech", and for which later on the term "semiotic" is introduced. The study of this "language" is "semiotics", a term corresponding to de Saussure's term "sémiologie" (σημεῖον = sign).

According to Hjelmslev, F. de Saussure realised already that the structural definition of language could not but force us to recognize as language also structures other than those of sound-and-meaning; philology would then become a branch of a general science of sign-systems, "*which would be the real theory of language in the structural sense of the word*" ²⁾. Here again Hjelmslev says that it is interesting to study "language structures" which are not languages in the conventional sense, because they reveal the "basic structure of language" without the complications "due to the superstructure of ordinary language". As such "language structures" Hjelmslev mentions here: traffic lights, telephone dial, and others ³⁾.

¹⁾ Or "langue linguistique" (*Editorial*, Acta Linguistica IV, '44, pp. IX, X).

²⁾ *Struct. Anal.* p. 76 (italics mine).

³⁾ *Struct. Anal.* p. 76.

In the pages at the end of OSG dealing with the delimitation of language de Saussure is also repeatedly referred to and in fact pp. 95 and 96 OSG are clearly an echo of those passages in the *Cours* where de Saussure treats of the same problem:

Cours: "La langue est un système de signes exprimant des idées, et par là, comparable à l'écriture, à l'alphabet des sourds-muets, aux rites symboliques, aux formes de politesse, aux signaux militaires, etc., etc. Elle est seulement le plus important des ces systèmes." ... "La linguistique n'est qu'une partie de cette science générale (viz. semiology), les lois que découvrira la sémiologie seront applicables à la linguistique, et celle-ci se trouvera ainsi rattachée à un domaine bien défini dans l'ensemble des faits humains" (p. 33). Cf. OSG p. 92, where, speaking of the "substance", in which language may be expressed, which may be a substance of, e.g., sound or of writing (ink), Hjelmslev continues:

"And this graphic "substance" can, precisely from the point of view of the substance, be of various sorts. There can be other "substances", too; we need only think of the navy flag-codes which can very well be used to manifest a "natural" language, e.g., English, or the sign language of deaf-mutes".

On p. 94, after giving a definition of language, Hjelmslev says: "This definition ... obliges the linguist to consider as his subject, not merely "natural", everyday language, but any semiotic — any structure that is analogous to a language and satisfies the given definition. A language (in the ordinary sense) may be viewed as a special case of this more general object, and *its specific characteristics, which concern only linguistic usage*, do not affect the given definition" (italics mine).

In OSG there is the same vagueness as in the *Cours* as to which is the more important study, *semiotics* or *linguistics*. Sometimes it seems as if both authors hold that semiotics should be studied first in order to find the characteristics of language:

Cours: "... la tâche du linguiste est de définir ce qui fait de la langue un système spécial *dans l'ensemble des faits sémiologiques*" (p. 33). "Si l'on veut découvrir la véritable nature de la langue, il faut la prendre *d'abord* dans ce qu'elle a de commun avec tous les autres systèmes du même ordre; et des facteurs linguistiques ... ne doivent être considérés qu'*en seconde ligne*, s'ils ne servent qu'à distinguer la langue des autres systèmes" (p. 35, italics mine).

Cf. OSG: "If the linguist wishes to *make clear to himself the object* of his own science he sees himself forced into spheres which according to the traditional view are not his" (p. 90, italics mine).

... "The linguist can and should concentrate on "natural" languages in his research work ... but the linguist cannot with impunity study language without the wider horizon that ensures his proper orientation towards these analogous structures. He can even derive a practical advantage therefrom because some of these structures are simpler in their construction than languages, and they are therefore suitable as models in preparatory study". (OSG pp. 94, 95). But sometimes it seems as if with both authors linguistics has the priority to the study of semiotics in the wider sense:

Cours: "... la langue, le plus complexe et le plus répandu des systèmes d'expression, est aussi le plus caractéristique de tous; en ce sens *la linguistique peut devenir le patron général de toute sémiologie*, bien que la langue ne soit qu'un système particulier". (p. 101, italics mine).

Cf. OSG: "We choose to take our start from the premisses of previous linguistic investigation and to consider so-called "*natural*" language, and this alone, as *point of departure* for a linguistic theory. ... We shall then have to do with further widenings of perspective, through which those sides of the global totality of human speech which were excluded from first consideration are again introduced and resume their place in a new whole" (OSG p. 19, 20, italics mine).

Towards the end of the book, in a chapter entitled "*Language and non-language*", Hjelmslev says (p. 90):

"In respect of the choice and delimitation of objects we have in the preceding sections ... followed the prevalent concept of linguistics and considered "natural" language as the unique object of linguistic theory". And then, speaking of the widening of the point of view now about to be undertaken: "In doing this we stress that these further perspectives do not come as arbitrary and dispensable appendages, but that, on the contrary, and precisely when we restrict ourselves to the pure consideration of "natural" language, they spring with necessity from "natural" language and *obtrude themselves with inevitable logical consequence*" (italics mine). ... "Actually it is at once clear that not only the quite general considerations we have been led to make, but also

the apparently more special terms we have introduced are applicable to both "natural" language, *and language in a far broader sense*. Precisely because the theory is so constructed that linguistic form is viewed without regard for "the substance" ... it will be possible to apply our apparatus to any structure whose form is analogous to that of a "natural" language. Our examples have been taken from such language, and we ourselves have proceeded from it, but what we are led to set up and what we have exemplified is evidently not specific to "natural" language but has a wider range. ... In other words "natural" language may be described on the basis of a theory which is minimally specific and which must imply further consequences" (OSG pp. 90, 91, *italics mine*).

And thus it would seem as if we see even immanent linguistics, previously advocated so strongly, gradually disappearing: "La méthode déductive exige qu'on parte des termes les plus généraux possibles. On ne saurait établir une linguistique immanente dans le sens étroit de ce terme. C'est *sémiologie* immanente qu'il faut dire, et *c'est sous cette réserve seulement* qu'on peut réclamer la méthode *immanente*" ¹⁾.

Besides the said points of agreement between the *Cours* and OSG there is also a difference as regards the relation between language and other semiotics. De Saussure realizes that what separates language from other semiotics is a difference of *system* — although we should perhaps not attach too much significance to the term in this context in the *Cours* —: "la langue ... un système spécial dans l'ensemble des faits sémiologiques" (p. 33). Hjelmslev, on the contrary, reduces the difference to one of *usage* only: " ... its specific characteristics, which concern only linguistic usage ..." (p. 95).

It may be advantageous to study language with "the wider horizon that ensures his (the linguist's) proper orientation towards ... analogous structures" (OSG p. 95), but that the advantage should be in the fact that some of these structures should be *only* "*simpler* in construction than languages" and should be suitable as *models*, is a statement that remains to be verified. Whether we should take other semiotics as *models* for the analysis of language, or inversely take linguistics as "*patron général* de toute sémio-

¹⁾ Hjelmslev, *Struct. Morph.* p. 87, (*italics mine*).

logie" — Chapter XII will show that there is an essential difference between language and other semiotics, that it is not merely a difference of *usage* but that it is a difference "qui fait de la langue un système spécial".

2. Theory

As regards the word 'theory' Hjelmslev himself admits that he uses it in a sense other than the ordinary one (OSG p. 14). But it is difficult to gather from OSG what exactly that meaning is. A theory in Hjelmslev's sense seems to be a system of formal premisses, arbitrary definitions and theorems, by which we can calculate the possibilities of combination of the constant elements of a text. But then again it seems to *be* this calculation itself, so a kind of method of analysis: the theory "constitutes ... a purely deductive system, ... it may be used alone to compute the possibilities that follow from its premisses" (OSG Ch. 5, p. 14). "The theory *consists* of a calculation from the fewest and most general possible premisses" (OSG Ch. 5 p. 15).

This conception is supported by what Hjelmslev himself says about his theory in Ch. 6 OSG: "A theory ... in our sense of the word, may be said to aim at *providing a procedural method* by means of which objects of a premised nature can be described self-consistently and exhaustively" (OSG p. 15). "The aim of linguistic theory is to provide a procedural method by means of which a given text can be comprehended through a self-consistent and exhaustive description" (OSG p. 16). Glossematic "theory", then, is to *provide* a method of analysis, but is sometimes *identified with* this method of analysis itself (see above): it is a *calculation*. But it has already been touched upon (p. 21 ff.) that glossematic theory has a wider range: it must be of use "for describing and predicting not only *any possible text composed in a certain language*, but, on the basis of the information that it gives about language in general, *any possible text composed in any language whatsoever*" (OSG p. 17). Finally, the calculation (= the theory) "permits the prediction of possibilities, but *says nothing about their realization*", that means: it does not matter whether the possibilities have been realized in any language or whether they only exist as results of the calculation ¹⁾.

¹⁾ Italics in this and the preceding paragraph are mine.

With respect to these features in glossematic theory two factors are of equal importance: the *arbitrariness* of the theory and its *appropriateness*. Before the discussion of these factors, however, another terminological matter requires a moment's attention.

3. *Calculus-calculation*

The last few quotations make it necessary to draw the attention for a moment to the *translation* of these passages.

For the two different words used by Hjelmslev: "beregning" or "beregningssarbejde" and "kalkyle" Whitfield also uses two words: "calculation" and "calculus". But he is not always consistent in his use of them. On p. 18 OSG Hjelmslev has twice "kalkyle" which Whitfield translates both times by "calculation". I would rather keep them apart: where Hjelmslev has "beregning" or "beregningssarbejde", I have put "calculation", reserving "calculus" for the cases where Hjelmslev uses the same word "kalkyle". Hjelmslev himself seems to use the two terms indiscriminately at times, thus when on p. 15 he says that the theory consists of a *calculation* (beregningssarbejde), which permits the prediction of possibilities; and again on p. 17 that the linguistic theoretician sets up a *calculation* (beregning) of all the conceivable possibilities; while in the same paragraph further down he says that the linguistic theoretician sets up a general *calculus* (kalkyle) in which all conceivable cases are foreseen. Also when on p. 16 Hjelmslev says that the *theory* (which he said before consisted of a *calculation* (p. 15)) provides a procedural method by means of which a given text can be described or comprehended; whereas on p. 17 we read that "this *calculus* (kalkyle) ... provides the tools for describing or comprehending a given text. We saw (OSG p. 12) that the theory — or rather the *description* — should be self-consistent and exhaustive, which is said later of the calculus: the theory "can be controlled only by tests to show whether the *calculus* is self-consistent and exhaustive" (p. 18 OSG, here the Danish "kalkyle" has been translated by "calculation" by Whitfield).

4. *Glossematic theory arbitrary, appropriate, and as simple as possible* ¹⁾

Because it would be impossible to work through all existing

¹⁾ See p. 21 ff. of the present.

texts of all languages, the linguistic theoretician must be content to start with a certain selection and build his theory on the data it affords him. Because it is thus built on *existing* texts the theory is *empirical* and *appropriate*, *valid*. It introduces certain premisses concerning which the theoretician knows from preceding experience that they fulfil the conditions for application to certain experimental data. These premisses are of the greatest possible generality and may therefore be able to satisfy the conditions for application to a large number of experimental data. The theory will be the more appropriate because the linguist will "take the precaution to foresee all conceivable possibilities — even such possibilities as he himself has not experienced or seen realized — and to admit them into his theory so that it will be applicable even to texts and languages that have not appeared in his practice, or to languages that have perhaps never been realized, and some of which will probably never be realized. Only thus can he produce a linguistic theory of ensured applicability" (OSG p. 17).

However, the texts on which the theory is built are *selected* (see above) and the properties found in them are *generalized* into a definition of language. In this respect the theory is *arbitrary*.

It is also arbitrary by virtue of its calculative character: the calculation will naturally be in itself independent of any experience. A theory, in the glossematic sense, therefore, "says nothing at all about the possibility of its application and relation to experimental data. It includes no existence postulate. It constitutes what has been called a purely deductive system, in the sense that it may be used alone to compute the possibilities that follow from its premisses" (OSG p. 14). The calculation predicts these possibilities "but says nothing about their realization" (OSG p. 15); the calculus of all conceivable possibilities "is deduced from the established definition independently of all experience, and provides the tools for describing or comprehending a given text and the language on which it is constructed. Linguistic theory cannot be verified (confirmed or invalidated) by reference to such existing texts and languages. It can be controlled only by tests to show whether the calculation is self-consistent and exhaustive" (OSG p. 17, 18). "The experimental data can never strengthen or weaken the theory itself, but only its applicability" (OSG p. 14).

Therefore, when with regard to linguistic theory the question is put: does the object determine and affect the theory or does the theory determine and affect its object?, the answer given by glossematicians is: "both—and": "by virtue of its arbitrary nature the theory is *arealistic*; by virtue of its appropriateness it is *realistic* (with the word *realism* taken here in the modern, and not ... in the mediaeval sense)" (OSG p. 15).

The arbitrariness of a linguistic theory is the natural consequence of the desire to calculate all linguistic possibilities. And it should be borne in mind that this arbitrary calculation is based on " ... *experiences* which ... should be *as varied* as possible" (OSG p. 17, italics mine). Like every linguist, the glossematician is supposed to start by collecting data from as many languages as he can get to know. The larger his collection of data is, the better will the applicability of his theory be ensured, and the easier it will be for him "to foresee all conceivable possibilities". Because it must *foresee* all possibilities the calculation must be made independently of all experience. And for the same reason it cannot be verified by reference to existing texts and languages: it includes cases that "have perhaps never been realized and some of which will probably never be realized". Hence "the experimental data can never strengthen or weaken the theory (read: calculation, BS) itself, but only its applicability"¹⁾. And hence the theory (read: calculation, BS) "can be controlled only by tests to show whether the calculus is selfconsistent and exhaustive"²⁾. In criticizing this idea of an arbitrary linguistic theory we should not overlook the other factor which is said to be of equal importance: the appropriateness of the theory, the applicability of its premisses which must be introduced from preceding *experience*³⁾.

¹⁾ Uldall says the same on p. 33 *Outline*.

²⁾ Uldall has it that the only criterion of a theory is success: "a theory is acknowledged as true as long as it is the most successful one available; the moment a better one is constructed, the earlier theory is brutally discarded. This makes the whole structure very insecure." (*Outline* p. 13).

³⁾ Cf. Uldall: "... the glossematician appears to be free to decide for himself how many classes he will create: the number of classes is surely determined by the algebra, which he has himself made for the purpose. But the glossematician is bound by his principle of Empiricism; if he makes the algebra too narrow in order to get a small number of classes, he runs the risk that it will not furnish exhaustive descriptions, or that it will not be applicable to all the objects he wishes to describe. ...

If the classes provided by the algebra prove insufficient, then the algebra stands condemned as unsuitable for the description of that object" (*Outline* p. 24).

Yet, with regard to this arbitrariness a few questions arise. Might not it be possible that a "reference to existing texts and languages" could show up a mistake in the basis of the calculation? Could not it show, for instance, that one of the generalizations was wrong? That the linguist had generalized a property which he had discovered was present in all those "objects that people agree to call languages" that he knew of, but which appeared to be absent in others discovered later? Or could not it show, for instance, that the linguist in a certain case had taken a phenomenon in some language known to him, as a realization of one thing, as a case of "phenomenon A", whereas by later investigation it appeared to be a realization of something else, a case of "phenomenon B"?

What we do in linguistic investigation or in any other investigation is never, I believe, simply to collect a number of data, disconnected facts, but we cannot help interpreting them, if only by considering them as "cases" of such or such a phenomenon ¹⁾).

If we cannot verify the calculus itself by reference to existing texts and languages, it would at least be necessary to verify again and again its basis: the "certain experiences", to see if they really are linguistic experiences and if they have been interpreted ("classified", perhaps) in the right way.

Another problem in this connection is the 'exhaustiveness' of the calculus. Can we ever prove that the calculus is exhaustive, that it includes all possibilities ²⁾? Should we not rather say that we can only prove its exhaustiveness as far as it concerns *existing* texts and languages known to us?

Uldall takes up this precaution in his statement on the exhaustiveness: "The algebra is a general description from which all particular descriptions, actual or potential, must be deducible. The ultimate test of its exhaustiveness must be by induction from all the particular descriptions deduced from it, but, to the extent that it is general, this induction necessarily remains incomplete, and as the particular descriptions presuppose the algebra, which must therefore be constructed in advance, *its exhaustiveness can only be estimated as a probability*" (*Outline* p. 22/23; italics mine).

¹⁾ Cf. Reichling, *Woord* p. 6, 7, quoted on p. 70 of the present.

²⁾ Cf. Garvin, *Review OSG* p. 77: "If we know the CODE, we can send any MESSAGE. The question which Hjelmslev leaves unanswered is: how do we know that we have the complete code, when we have derived it from a finite number of messages only?"

Further: Hjelmslev himself says when dealing with empiricism (p. 11): "in order to conform to its purpose, a theory must be capable of yielding, in all its applications, results that agree with so-called ... experimental data". How can we control these results of the theory, one would ask, otherwise than by reference to such experimental data — in casu, to existing texts and languages? And is not the value of a theory to be measured by the results we get when we apply it? Here again: verification — though indirect — by reference to existing texts and languages would seem to be required.

What Hjelmslev says on p. 14 about the applicability of the theory comes down to this, that the applicability of a theory can be weakened without the theory itself being weakened. Indeed, Hjelmslev's 'theory' = method of analysis, calculation, will remain the same as such, irrespective of experimental data, but if the applicability of this method of analysis was weakened, would not that at the same time weaken the *value* of the method of analysis, if not the method as such? If the value of a method of analysis is entirely independent of its applicability, what, then, decides its value? Hjelmslev himself considers this applicability an important factor of his 'theory' (Cf. p. 14), equally important as he considers its arbitrariness. He speaks of the necessity "to produce a linguistic theory of *ensured applicability*"; of "the best way of meeting the *requirement* of applicability". How could we control this applicability otherwise than by reference to *experimental data* — in casu: to *existing texts and languages*?

If we are going to exclude all those experimental data to which the 'theory' appears not to be applicable are we sure we shall never exclude something hitherto unknown but used as a language in some forgotten corner of the earth, a thing which people, when they discover it in a faraway future, will be sure to "agree to call *language*"?

Hjelmslev himself says concerning 'induction': "l'induction reste par définition incomplète. Impossible de savoir si la collection est complète ou non" et: "on ne possèdera jamais la totalité du particulier sans se placer dès l'abord sur le point d'Archimède fourni par le général". (*Struct. Morph.* p. 83, 84). Are we sure we shall never discover another (old or new) phenomenon in a language now known and recognized as a *language*, which will

change our collection of *experiences* on which we base our calculation and which will therefore *change* our linguistic 'theory'? Language is like a living organism: some kinds of the species die out, other kinds, hitherto unknown and never imagined, may come into existence. Will Hjelmslev simply refuse to call them languages or language-phenomena because they do not fit in in his 'theory', or rather: because his 'theory' cannot be applied to them?

To these questions Hjelmslev would probably answer that such things cannot happen when the calculation has foreseen all possibilities, and that we cannot test the 'theory' by reference to existing texts but that of course we must test its premisses by such a reference; but that that was what he started from when saying that the calculation is set up from certain *experiences*. We conclude then, that not the 'theory' can be strengthened or weakened by reference to existing texts, but that its *premisses* can. But that *the 'theory', being a calculation, a method of analysis, does not stand or fall as such with the soundness of the data it is based on*¹⁾.

Recapitulating: what we must do to test the soundness of Hjelmslev's theory (in the ordinary sense) is: verifying by reference to existing texts the soundness of the *premisses* his calculation is based on. Hjelmslev theory (in the glossematic sense: = calculation) can only be tested by its own "*empirical principle*", in which the "*simplicity principle*" has the last word.

What might only be strengthened or weakened by a reference to existing texts, therefore, would be the right to call the theory a *linguistic* theory.

Some remarks remain to be mentioned that have been made regarding the *simplicity principle*, which is an elaboration of the last requirement stated in the 'empirical principle': that the description shall be as simple as possible.

"If ... linguistic theory ends by constructing several possible

¹⁾ This is the principle of Formal Logic, which, according to Collinson, "is defined in the *Americana* Encyclopaedia as that science which has for its object the complete analysis and systematic presentation of the principles and methods of deductive reasoning i.e. that type of reasoning in which conclusions are drawn from given premisses. *It is not concerned with the truth of the premisses* or of the conclusion nor with the particular language in which they are conveyed". (*Some Recent Trends in Linguistic Theory with Special Reference to Syntactics*. *Lingua* I, 3, 1948, p. 316, italics mine).

methods of procedure, all of which can provide a self-consistent and exhaustive description of any given text ... then ... that one shall be chosen that results in the simplest possible description. If several methods yield equally simple descriptions, that one is to be chosen that leads to the result through the simplest procedure" (OSG p. 18). Only by reference to this principle can we say that one self-consistent and exhaustive solution is correct and another incorrect.

Martinet asked in 1946 if it might not happen that two solutions would appear to be equally simple in both respects and that a choice would not be possible ¹⁾.

In 1949 Spang-Hanssen points out that the decision which of the several procedures is the simplest gives rise to special problems, and in the first place presupposes an objective standard for what is simplicity. Further, that the simplicity of a description (i.e. the result of a description) is not only dependent on the description itself but on the process of which the description is a part; that it is a relative concept, which has significance only if the purpose to which the description is applied is indicated. For "since descriptions may aim at different aspects of the texts it is ... to be expected that a description which in one respect is relatively simple will prove to be less simple in other respects. An estimate of the simplicity of a description used as a means of predicting presupposes that the special goal of the prediction is known. Simplicity is a relative concept just as expediency" ²⁾. Spang-Hanssen discusses the problem of simplicity in connection with the description of phonemes according to their possibilities of combination and according to their phonetic qualities.

In 1952 Miss Fischer-Jørgensen, dealing with some less general problems of phonemic analysis, comes to the same conclusion within the sphere of her subject: Phonemic analysis, according to her, must be based to a large extent on considerations of phonetic similarity and difference, but it is by no means irrelevant from which side we consider those phonetic qualities. The analysis may give different results according to whether the articulatory, the acoustic ³⁾ or the auditory stage of the speech event is described,

¹⁾ A. Martinet: *Review OSG*, p. 36.

²⁾ H. Spang-Hanssen: *On the Simplicity of Descriptions, Recherches*, pp. 61, 62.

³⁾ 'Acoustic' is used by Miss Fischer-Jørgensen in the sense of Bloch and Trager (*Outline*): it is concerned with "vibrations of air" and "sound waves" (*Outline* p. 11).

and she concludes: "General reasons for preferring one aspect to another cannot be found at the present moment, and perhaps never will be, *since one analysis seems more appropriate for one purpose, another for a different purpose*" ¹⁾).

But there is more to the simplicity question.

While the two authors quoted above have shown that it will be difficult to point out which glossematic description of a particular language is the simplest possible for that language, Uldall points out that a glossematic description of a particular language can never be the simplest description possible, not even the simplest glossematic description possible, for that language, for the obvious reason that languages, and consequently their particular descriptions, differ in complexity and that the less complex ones must be "brought under one hat", as regards glossematic description, with the most complex one there exists: "the descriptive apparatus" (the algebra) "must be equipped to deal with the highest degree of complexity that can be foreseen to come within its scope. As the glossematic algebra is designed to be general ... it cannot be claimed that any particular glossematic description is the simplest possible self-consistent, exhaustive description of its object. The compensation for this sacrifice of particular simplicity is the gain in general simplicity which results from getting a large number of uniform descriptions.

The construction of a descriptive apparatus is thus beset with the struggle between two conflicting desires: 1°. to make the algebra as general as possible, applicable to as wide a diversity of particular descriptions as possible, which means increasing its power of differentiation and thus its complexity; and 2°. to ensure the greatest possible simplicity of particular descriptions. *The result is a compromise which must be unendingly tested and revised*". (Outline p. 23, italics mine).

Miss Fischer-Jørgensen mentions the same conflict between a description "which will give a sound basis for comparisons between languages" and the classification of the phonemes of a language in the simplest possible way. She solves the problem by assuming the requirement of more than one classification: "the conflict is reduced to the observation that different

¹⁾ E. Fischer-Jørgensen: *The Phonetic Basis for Identification of Phonemic Elements*, p. 617 (italics mine).

classifications may be preferable for different purposes" (*On the Definition of Phoneme Categories*, Acta Linguistica VII, 1952, p. 11).

The same author points out ¹⁾ that a greater simplicity in the glossematic system results inevitably in a greater complication of the glossematic description of the chain. (Cf. also p. 208 of the present). Further, the principle of simplicity offers another difficulty with respect to the classification of phonemes by their possibilities of combination: Miss Fischer-Jørgensen points out very rightly that "the result of such a classification depends on the way the phoneme inventory has been established. The more the inventory is reduced, the greater will be the uniformity of distribution, and the more restricted the possibilities of classification on distributional grounds. These two aims of the analysis (to get few phonemes, and many categories), seem to a certain extent to be in mutual contradiction". (*On the Definition of Phoneme Categories*, Acta Linguistica VII, 1952, p. 39).

All this shows that the *simplicity principle* is in itself no simple principle.

¹⁾ *Remarques sur les principes de l'analyse phonémique*. Recherches p. 225.

CHAPTER IV

THE PRINCIPLE OF ANALYSIS

1. *The System of Definitions*

After the first seven chapters which give the more general views of glossematic theory, Chapter 8 may be considered as an introductory chapter to the following part of OSG, which gives the theory in detail.

In it Hjelmslev insists on extensive defining, which he considers as a contributory cause of the freedom of linguistic theory from specific axioms. Linguistic theory must be as unmetaphysical as possible, he says, it must contain as few implicit premisses as possible. Hence premised definitions will be introduced before those that premise them.

These definitions must be strictly *formal*: they should not “try to exhaust the nature of the objects” defined, as real definitions do, but only “anchor them relatively in respect to other objects, similarly defined or premised as basic” (OSG p. 20).

Besides these, it will be necessary to introduce some *operational* definitions, whose role is only temporary. Part of them may in a later stage of the procedure be transferred into formal definitions.

Any science will profit by an appropriate strategy of definitions which will in many cases make it possible to lower the number of axioms and postulates. Hjelmslev lays great stress on the importance of this especially in the case of linguistics. In this connection Martinet mentions frequent terms such as “word”, “morpheme”, “genitive”, “qu’on serait bien en peine de définir exactement”¹⁾. But we should not forget, he adds, the serious endeavours of phonology to establish such a scientific terminology for linguistics.

However, will it be possible to do entirely without axioms and,

¹⁾ A. Martinet, *Review OSG* p. 35.

among the undefined terms that have to be introduced, will there be none that is specifically a linguistic term, as Hjelmslev has it? With Vogt I should like to leave this question unanswered. "Sur ces points j'aimerais mieux réserver mon jugement jusqu'à ce que je voie ce qui arrive quand on applique la théorie exposée à l'analyse d'un état de langue donné" ¹⁾). It is a question that does not worry glossematians, however. Uldall writes: "it is ... a matter of comparatively free choice which elementary terms are to be left as primitive and which defined, since the whole system serves to define the formally undefined terms". (*Outline* p. 19).

2. *The Principle: an a priori*

It was seen (p. 27, 37) that Hjelmslev, taking for granted finding^a and analysis¹, sets himself to establish the principle of the second analysis, of glossematic analysis proper. This principle, like all principles of analysis, is established beforehand, *a priori*. How else could Hjelmslev arrive at the assertion that "*the only possible procedure*" to find the system of a text is "an analysis, in which the text is regarded as a class divided into segments, then these segments as classes divided into segments" etc. (OSG p. 13)? This, and the statement that *the only possible system* behind the text is that of a class divided and subdivided into segments, are Hjelmslev's *a priori*'s. It is a question if no objections could be made against this procedure and against this system to start from. What about the objection, for instance, that no inventory could be made of the largest "classes": periods, or sentences? Their number is unlimited. It is precisely what distinguishes language from any other system of signs that the number of possible combinations of significant elements is unlimited, as Hjelmslev says (OSG p. 43).

It would seem as if in the establishment of this principle of glossematic analysis an essential requirement is overlooked. The principles which are chosen by the linguist, the principles chosen by any theoretician to analyze his object, should not be taken from elsewhere, but they are to be taken from the object of

¹⁾ Vogt, *Review OSG* p. 97.

analysis itself: “... there will be no science of the nature and ordering of the facts of language”, says Reichling, “but for the observation of those facts and the guiding principle ... which the investigator derives from the single fact. ... He who wants to know something about the regularity of certain phenomena must *of necessity* order those phenomena according to some guiding principle, even if it should only be:” “make a list of the forms ending in -s”, or: “collect the groups of words beginning with ‘that’”... The guiding principle may be simple or more complicated, it must, however, be deduced from a fact in question and cannot simply be introduced from outside. In this sense *all* scientific investigation presupposes “eine vernünftige Theorie”” (*Het Woord* p. 6, 7, translation mine).

3. *The Premises*

A few remarks in this connection about the *premises of glossematic theory*. Hjelmslev justly desires that a theory should not build on any other premises than those necessarily required by its object (OSG p. 11), only they should be “explicitly introduced by linguistic theory” (OSG p. 15).

In glossematic theory, then, only those premises will be introduced that are necessarily required by its object: language. On the other hand those premises will not be specific to linguistic theory, they will be the same premises as other theories make use of: “... linguistic theory traces its premises back a great distance, with the result that its premised axioms are so general as to make it seem impossible for any of them to be specific to linguistic theory as opposed to other theories. This is done because our aim is precisely to make clear our premises as far back as we can without going beyond what seems directly appropriate to linguistic theory” (OSG p. 15).

The question must be raised: what, then, is to decide which of these general premises are “necessarily required” for an analysis of language? What will decide which is “directly appropriate to linguistic theory” and which is not? When do we go beyond it? Is it only intuition, a personal feeling or preference, is it only “what *seems* directly appropriate to linguistic theory” (*italics mine*) that decides how far the premises shall be traced back and which of them shall be chosen for linguistic analysis?

Glossematics does not answer this question because it only stresses one side of the truth: that a theory should not build on *more* premisses than those necessarily required by its object. But the other side of the truth should not be overlooked: that a theory should not try to build on *fewer* premisses than those naturally required by its object.

If glossematics is to be based on empirical data, it should, in this place where it deals with the premisses of its theory, have stated the other thing that is given to the linguistic investigator besides the unanalyzed text: the knowledge of what this text means, the ability to distinguish its relevant parts. These are data which glossematic analysis cannot do without. And they will furnish a satisfactory criterium as to what premisses are necessarily required by linguistic theory.

4. *The Basis of Division*

In Ch. 9 OSG the glossematic principle of analysis is explicitly discussed. We saw that in previous chapters "the nature of the analysis and the concepts that enter into it" (OSG p. 21) have already been very roughly defined:

the nature of the analysis: a continued division;

the concepts that enter into it: classes and segments.

But with the application of this universal principle of analysis "the choice of *basis of division* may differ for different texts" (OSG p. 21). Hjelmslev does not define what he means by "basis of division", but it is clear that it must be something other than the "principle of analysis", for Hjelmslev says it is not universal whereas the latter is said to be universal. The reader who has advanced to this point in OSG cannot but take the "basis of division" as the decision where, in the undivided whole of a text, the partition lines are to be drawn, in other words: what "parts of the text are to be considered as "segments" and as "segments of those segments" — in ordinary terms: which parts of the text are to be considered as 'periods', 'sentences', 'words', etc. But his explanation is upset by the fact that a text is divided into, e.g., sentences or words in only one way, not in more than one way.

Hjelmslev says that this basis of division can be established "through a general calculus that takes into consideration the conceivable possibilities". But even when we have calculated all

the conceivable possibilities there remains the choice to be made, the reader will say, of one out of them. And that choice may differ for different texts, says Hjelmslev. But ... what decides this choice? What is it that will decide where in a given text the partition lines have to be drawn between, say, periods, or between sentences? Is it not the linguist's own knowledge of the words and their combinations in the text he is going to analyze, his ability to distinguish them and his knowledge of their meaning, which leads him to the right division? Why should we try to do without those data offered by the text itself?

These and similar objections will be silenced when the reader has advanced to the next paragraph in OSG, where the mutual *relations* between the parts of a text are said to be the only thing that matters for their description and thus for the division of the text. The passage about the principle of analysis and the basis of division (OSG p. 21) is only intelligible when read in the light of what follows: that the parts of a text may stand in different relations to each other. A certain part may, for instance, always require the presence in the text of a certain other part *and vice versa*, or *not vice versa* etc. Now the choice of the basis of division is the choice of *which kind of relation* we shall look for in the text. It is clear that when we look for cases where a certain part requires the presence of a certain other part in the text and vice versa, we shall find other things to register than when we look for cases where the "dependence" is not mutual. It is also clear that we may thus "analyze" a text more than once, by first registering all the cases in which we find one kind of dependence, and then all the cases where another kind of dependence occurs: "Furthermore it can now be considered that the description of the given object (text) is not exhausted by ... a continued (and in itself exhausted) partition from one basis of analysis, but that the description can be continued (i.e., *new dependences can be registered*) through other partitions from other bases of analysis". (OSG p. 28, italics mine).

This shows once more that the division of the text into its sentences and words e.g., and generally into all its "parts" is presupposed by glossematic analysis, which is only meant as a final control. We shall have to repeat this to ourselves again and again.

5. *All-importance of the Dependences*

The conclusion of *the all-importance of relations* comes rather unexpected: "It soon becomes apparent that the important thing is *not the division of an object into parts, but* the preparation of the analysis so that it conforms to the mutual dependences between these parts, and permits us to give an adequate account of them". (OSG p. 21, 22, italics mine).

Hjelmslev merely introduces this crucial statement by the words "It soon becomes apparent" ¹⁾. He does not demonstrate by a few instances taken from actual language how "it becomes apparent" — the statement itself is supposed to suffice for his readers ²⁾. To many of them, however, it will not become apparent why the important thing should be only a registration of the dependences between the parts of a text, nor how Hjelmslev can say beforehand that "in this way ... the division becomes adequate" nor what should lead to the conclusion that both the text itself "and its parts have existence only by virtue of these dependences" (OSG p. 22). To reach these conclusions from the immediately preceding statement that "there are several possible ways of dividing" a text, requires a rather big jump. But that is no reason why it should not be tried to test these statements as such. This will be done in Ch. V, 3, where the importance of the "substance" will be considered.

6. *The Nature of the Dependences*

After deciding that only the dependences between the parts of the object matter, Hjelmslev goes on to describe what kinds of dependences the linguist may expect to find. The main terms are:

¹⁾ Uldall, at least, gives as the reason that the most striking characteristic of science is its great abstractness, that "the exact sciences do not deal with the whole mass of the observed universe but only with one aspect of it, viz. functions" (in the sense of: any dependence whatever) "... To the scientific view the world does not consist of things, or even of "matter", but only of functions between things, the things themselves being regarded merely as points in which functions meet. "Matter" as such is completely ignored, so that the scientific conception of the world is a diagram rather than a picture" (p. 8). Thus, "an autonomous discipline can be built up only ... by a rigid selection of a set of functions as necessary and sufficient for unambiguous description, i.e. by abstraction. You cannot make a map if you insist on bringing in all the hills, valleys, houses, and trees in life size and complete to the last wood-louse". (p. 11, *Outline*).

²⁾ Haugen calls Hjelmslev's definition of analysis as "description of an object by the uniform dependences of other objects on it and on each other" "the basic postulate" of Hjelmslev's theory. (*Review OSG* p. 248).

Interdependence (one term presupposes the other *and* vice versa: both terms are *constant*)

Determination (one term presupposes the other but *not* vice versa: one term is *constant*, the other is *variable*)

Constellation (neither term presupposes the other, but the two terms are compatible: both terms are *variable*).

For each of these three sorts of dependences *and* for the word 'function' Hjelmslev gives other names according to whether they enter into a process or a system, so we get twelve different words to remember to begin with. Below, these *relations* have been arranged in a scheme. Following it is the scheme of the names given to the *parts* found by a division as described above. These parts, too, are differently named according to whether they are viewed as parts in the process (text) or as parts in the system.

SCHEMATIC SURVEY OF THE PRINCIPAL
TERMS USED ¹⁾

Terms used with reference to Text and System		Terms used with reference to Text = Process = Syn- tagmatic = Rela- tional hierarchy	Terms used with reference to Sys- tem = Paradig- matic = Corre- lational hierarchy
Function		Relation Connection Function 'both-and'	Correlation Equivalence Function 'either-or'
Reciprocity . . . (2 of the same kind)	Interdependence (2 constants)	Solidarity	Complementarity
Cohesion (1 constant)	Determination (1 constant, 1 variable)	Selection	Specification
Reciprocity . . . (2 of the same kind)	Constellation (2 variables)	Combination	Autonomy

¹⁾ The glossematic symbols for the various functions are given in a note to p. 25 of the English translation of OSG (*Prolegomena* ...). See, however, H. J. Uldall. *On Equivalent Relations*, for another notation (*Recherches*, p. 72).

TERMS USED WITH REFERENCE TO THE ANALYSIS AND ITS PARTS:

Relational Hierarchy (= text, process, syntagmatic)			Correlational Hierarchy (= system, paradigmatic)		
Analysis = Division = Partition			Analysis = Division = Articulation		
Class = Chain			Class = Paradigm		
A.	Segment (Part) of A (1st degree derivative of A)		Segment (Member) of A (1st degree derivative of A)		A.
B.	Segment } of B (Part) (1st degree derivative of A)		Segment } of B (Member) (1st degree derivative of A)		B.
C.	Segment } of B (Part) (2nd degree derivative of A)	Segment } of B (Part) (2nd degree derivative of A)	Segment } of B (Member) (2nd degree derivative of A)	Segment } of B (Member) (2nd degree derivative of A)	C.
D.	Segments (Parts) of C (3rd degree derivatives of A) Etcetera		Segments (Members) of C (3rd degree derivatives of A) Etcetera		D.

As the scheme shows, even for the words 'text' and 'system' there are other names.

Of this table of relations it is the *syntagmatic* relations, those in a text, which are most often mentioned in the following pages of OSG. With regard to "selection" there is even a verb that occurs repeatedly: the variable is said to *select* or *determine* (general term) the constant.

It seems as if these relations have been established after a mathematical "calculation" of possible dependences, independently of any linguistic facts. Still — if this had been the case a fourth relation ought to have been added for completeness' sake: the relation where the presence of a certain element in the text *precludes* the presence of a certain other element, the opposite of the interdependence, so to say ¹⁾. When asked after the reason why this relation has not been taken up in the list, Hjelmslev answers that experience has taught him that it is not "hensigtsmaessigt", not *expedient* to attempt an analysis of a text by looking for that "dependence" ²⁾. And in view of the author of OSG's extensive knowledge of foreign languages this answer must be entirely satisfactory. But it demonstrates a remarkable fact. It proves that the so called "algebraic" calculation of possible combinations is, at its outset, not purely algebraic, but based on an inductively obtained experience to a much larger extent than a first reading of OSG would lead one to believe.

However, there is another relationship which seems to be neglected by OSG whereas its inclusion is not only "expedient" but absolutely indispensable for an adequate description of

¹⁾ Of course 'exclusions' might be considered as negative 'determinations': x presupposes $-y$; y presupposes $-x$, or, in glossematic notation: $x \rightarrow -y$; $y \rightarrow -x$.

²⁾ Cf. Uldall, first quoting Ritchie: "What is absolutely necessary is that the investigator should not allow any hypothesis to give him a bias against the facts. Apart from this the more hypotheses he has the better": "... a deductive theory is no more than a very general and very elaborate hypothesis. Just as the ordinary hypothesis selects and limits the "facts" to be examined, so does the theory select and limit the terms in which particular descriptions shall be made and thus the laws that can be framed by induction from the sum of particular descriptions. Without such direction induction becomes wild and unmanageable — if, indeed, it is possible at all" (*Outline* p. 35). The criterion for the choice is then: *relevance*, not to the object but to the *theory*: "When, in glossematics, we select certain functions to the exclusion of others, it is therefore not through a belief in any absolute superiority of the functions selected but only because these functions alone are *relevant to the theory*" (*Outline* p. 37, italics mine).

language. Garvin mentions it very incidentally: it is *the relationship of fixed order*. (*Review OSG* p. 73). This relationship is not only, as Garvin remarks, "used ... to define the word in Kutenai", but it is an essential element to define the word and the phonemes in any language. We omit a great part of the description of the English word and of, e.g., the English phonemes *p* and *r* if we state that *p* and *r* in initial position enter into a constellation (either may occur alone: 'pate', 'rate' and they may occur together: 'prate') and if we do not state as well that in the latter case *p* must precede, *rp* being impossible. It is not without reason that Reichling includes the *fixed order of the elements* in his *word definition*¹). The only thing Uldall has to say about this important factor is that "it is obviously necessary to devise some means of differentiating e.g. "fist" and "fits"; but that is a problem which does not concern us here and will be dealt with later" (viz. in part II) (*Outline* p. 45).

Another relationship not covered by the glossematic algebra is that of the "frequency relations": a normally presupposed element may occasionally be absent in speech; one combination may be rare whereas another is frequent; or, more complicated: a combination may be rare in the language fund but frequent in speech, as is the case with English initial voiced *ð*, which is rare but which "owing to the constant use of words like 'this, there, then, etc., begins a respectable proportion of the words in any running text'"²). The *frequency* of the occurrence of a combination characterizes a language at least as much as the occurrence of the combinations itself.

C. E. Bazell, in his *Review of Louis Hjelmslev: Omkring Sprogteoriens Grundlaeggelse* (Archivum Linguisticum I, 1949, p. 89), asks: "What importance for example is to be attached to very occasional absence in speech of a normally presupposed morpheme — is there any abrupt line of demarcation between the unusual combination, which may pass unnoticed, and the sheer error which will probably be followed by self-correction? The terminology proposed would seem to imply that there is. Common sense would suggest that the difference between a

¹) Reichling, i.a., *De Taal, Haar Wetten en Haar Wezen*, ENSIE II, 1947, p. 39.

²) A. Classe, *Review of E. Kruisinga: The Phonetic Structure of English Words*. Archivum Linguisticum I, 1949, p. 81. See also Wells' example of the difference in environments between 'light' (opp. 'dark') and 'light' (opp. 'heavy'). *Review Recherches* p. 557. Also Haugen, *Directions in modern Linguistics* p. 219.

very rare combination and a very common one is as important as that between a very common and a necessary combination ("solidarity"). See also p. 195 of the present.

Also Uhlenbeck rightly signalizes the problem, already mentioned by Martinet, how to distinguish in the description between "ce qui est licite et ce qui ne l'est pas", between "le potentiel et l'irréalisable", (*La phonologie du mot en danois*, p. 63, quoted by Uhlenbeck ¹⁾), or, in Uhlenbeck's own words: "how to separate the combinations that cannot possibly occur from those which might have been made, but are 'accidentally' not to be found" (Op cit. p. 261) Already Trubetzkoy drew attention to this (*Grundzüge* p. 239 ff.: "Die phonologische Wortschatzstatistik"). In this connection I think, for instance, of the combination *skr-* in initial position in Dutch, which does not occur though an imaginary word beginning with this sound-group does not sound "foreign" at all. (See also on this point Miss Fischer-Jørgensen in TCLC V, 1949, p. 230). This cannot be said of the example Ebeling gives in this connection of the new English word 'shmoo', which brings him to the conclusion that "the absence of the combination *šm* was accidental" until the time this new word appeared (C. Ebeling, *Phonemics and Functional Semantics*, *Lingua* III, 3, p. 320). In spite of the new word, however, to me the combination *šm* in initial position sounds definitely "foreign" in English and I doubt if the criterion of a connotation is of any value here.

Others, too have paid attention to this very difficult problem of "the limit between structural laws and accidents of utilization": "Generally one has a vague feeling that there is a difference, and there would be general agreement in the extreme cases The question is whether we can find valid arguments" (Eli Fischer-Jørgensen, *On the Definition of Phoneme Categories*, *Acta Linguistica* VII, 1952, p. 32) ²⁾. Miss Fischer-Jørgensen quotes Vogt who says that the vague feeling can probably be stated in terms of structural rules, articulatory patterns and *statistical frequency*, and agrees in considering these the essential aspects of the problem (p. 33). But she adds at once that "it must be emphasized that it is theoretically impossible to fix a non-arbitrary borderline between law and accident. *Laws may be stated as deviations from accidental distribution; and there are many degrees of deviation.* She states as a very general principle that the higher a rule (governing, e.g., the non-occurrence of a specific cluster) is placed in the hierarchy of categories „the greater is the num-

¹⁾ *The Structure of the Javanese Morpheme*, *Lingua* II, 3, p. 245.

²⁾ Cf. also Ebeling's conclusion, *Lingua* III, 3, 1952, p. 319: "unfortunately, as we have to keep away from normative rules, we are unable to decide whether the grammarian's or the writer's testimony is more convincing".

ber of particular cases which it will generally cover, and the safer it is" (p. 33). Miss Fischer-Jørgensen draws attention to the indeed very wide consequences of the assumption of what she calls "accidental gaps" for glossematic analysis in view of the glossematic concept of catalysis: "When the gap is accidental, the combination in question is possible, and it does not matter for the commutation that a word-pair with a minimal difference is not found, provided that it can be constructed without breaking the laws of the language. The border between law and contingency should be established for each language, and *the accidental gaps should be utilized for the commutation, and all structural laws for the establishment of subcategories of phonemes*" (p. 37, 38). She mentions other factors that will have an influence in the introduction of, e.g., new consonant clusters into a language: "... only the relative difficulty of assimilation would be of interest in this connection, not the absolute difficulty, for this depends also on social and psychological factors: many European languages are more inclined to take over foreign words without alteration nowadays than some centuries ago. In Finnish all initial clusters were simplified in older loanwords; but in recent loanwords clusters can be found. And this is not simply a question of time, but of social attitude" (p. 38).

With the *examples* for the terms of these dependences we find ourselves in the midst of the concepts established by classical grammar: "If we look for solidarities within texts of an individual language we find them easily. For example, in a language of familiar structure, there is very often solidarity between *morphemes*¹⁾ of different categories within a "grammatical form", such that a morpheme of one category within such a grammatical form is necessarily accompanied by a morpheme of the other category and *vice versa*. Thus both a *case* morpheme and a *number* morpheme always enter into a Latin *noun*, never one of them alone" (OSG p. 24, italics mine).

Here we see put in practice the words of Séchehayé which Hjelmslev quoted already in *Principes*: "En attendant mieux, la grammaire scolaire constitue toujours le fonds commun des idées dont on part pour chercher par la discussion à les approfondir et à les corriger" (*Principes* p. 297). Hjelmslev stresses as a very important aspect of those dependences — that they occur within the word just as well as between words. De Saussure mentions this

¹⁾ For the glossematic term *morpheme* see p. 212 below.

too, it may seem: "D'autre part, tout mot qui n'est pas une unité simple et irréductible ne se distingue pas essentiellement d'un membre de phrase, d'un fait de syntaxe; l'agencement des sous-unités qui le composent obéit aux mêmes principes fondamentaux que la formation des groupes de mots" (*Cours* p. 187). This is where Hjelmslev has "thought an important thought of de Saussure to the end": he holds it applies to phonemes too. Pp. 25 and 26 OSG contain many interesting ideas, so for instance what is said about the analysis of the syllable: "A syllable may be divided on the same principle: under certain structural conditions which are very common, it is possible to distinguish between a central part of the syllable (the vowel, or sonant) and a marginal part (the consonant, or non-sonant), by virtue of the fact that a marginal part presupposes textual coexistence of a central part but not *vice versa*. This principle is, indeed, the basis of a definition of vowel and consonant ..." (OSG p. 26).

7. *Uniformity of the Dependences*

Not only do there exist dependences between the parts of a whole, but also between the whole itself and each of its parts. The latter dependences are always of the same kind: "coordinate parts, which proceed from an individual analysis of a whole, depend in a mutually uniform fashion on that whole" (OSG p. 27). Accordingly Hjelmslev speaks of the *uniformity* of the dependence". The next sentence: "This feature of uniformity we find again in the dependence between the so-called parts" is ambiguous: Hjelmslev does not mean the parts of the *same* class mutually, I believe, but between the 'parts' viewed as 'classes' and each of the parts into which they are further divided, thus between the so-called 'parts' and each of *their* 'sub-parts': "If, for example, our division of a text produces, at some stage, clauses and if we find two kinds of clauses (defined by a specific dependence between them) — primary clauses and secondary clauses — we shall (so long as no further analysis is undertaken) always find the *same* dependence between a primary clause and a secondary clause dependent on it, wherever they may appear" (OSG p. 27). It is evident that the 'same-ness' of such a dependence can only mean one thing: the *fact* that the secondary clause is dependent on the primary clause; not the *way* in which it

depends on it. I should say that for instance a relative clause depends in a different way on its primary clause (viz. on *one* word out of it) than does an adverbial clause, but probably Hjelmslev counts this as belonging to a 'further analysis'. And indeed, if the dependence is only described as one out of the three possibilities mentioned: interdependence, determination and constellation, the dependences between the whole and each of its parts are all *determinations*: the parts presuppose the whole (OSG p. 29), the subclause presupposes the headclause. Only in that sense can the dependences be said to be *uniform*.

8. *Conjunction-Disjunction*

In 1939 Hjelmslev distinguished between:

1. la dépendance *paradigmatique* (la dépendance "ou – ou") entre termes *alternatifs* ou la *disjonction* logique (= correlation, belongs to the *system*).

2. la dépendance *syntagmatique* (la dépendance "et – et" entre termes *coexistants* ou la *conjonction* logique) (= relation, belongs to the *text*) "le système, qui est par définition paradigmatique, n'existe qu'en vertu de la conjonction syntagmatique" ¹⁾.

OSG explains this difference as follows: "... in the text is present a both-and, a conjunction or coexistence between the functives entering therein; in the system is present an either-or, a disjunction or alternation between the functives entering therein.

Consider the ... example

p e t
m a n

By interchanging *p* and *m*, *e* and *a*, *t* and *n*, respectively, we obtain different words, namely, *pet*, *pen*, *pat*, *pan*, *met*, *men*, *mat*, *man*. These entities are chains that enter into the linguistic process (text); on the other hand, *p* and *m* together, *e* and *a* together, *t* and *n* together produce paradigms, which enter into the linguistic system. In *pet* there is conjunction or coexistence, between *p* and *e* and *t*: we have "in fact" before our eyes *p* and *e* and *t*; in the same way there is conjunction or coexistence between *m* and *a* and *n* in *man*. But between *p* and *m* there is disjunction, or alternation: what we "in fact" have before our eyes is *either p or*

¹⁾ *Structure Morph.*, p. 80. This corresponds to the distinction of "contrast" and "distribution" respectively in American linguistics. (Einar Haugen, *Review OSG*, p. 248.

m; in the same way there is disjunction, or alternation, between *t* and *n*" (OSG p. 34).

This difference is what de Saussure calls: opposition syntagmatic versus opposition associative (*Cours* p. 180) ¹⁾.

Wells points out that de Saussure's phonemes enter into the same two types of oppositions as signs (*Cours* p. 178), and this is in fact what Hjelmslev says too: "In a way we can say that all functives of language enter into both a process and a system, contract both conjunction, or coexistence, and disjunction, or alternation, and that their definition in the particular instance as conjuncts or disjuncts, coexistents or alternants, depends on the point of view from which they are surveyed" (OSG p. 34).

9. *Inventories*

The analysis can yield units which belong in several degrees of analysis, e.g. Latin *i* (go!) is a clause, a word, a syllable and a phoneme. Such entities must be transferred undivided from one stage of analysis to the next, they should not be further divided at too early a stage of the procedure. To prevent this a "rule of transference" is introduced: in each single partition we shall have to make an inventory of the entities which have the same relations i.e. which can take the same "place" in the chain. For instance inventories should be made of all primary clauses and of all secondary clauses (OSG p. 38).

The inventories will decrease in size as the procedure of deduction goes on. After registering "an unrestricted number" of sentences, clauses, words, we shall come to a point "at which the number of the inventoried entities becomes restricted and after which it usually falls steadily." A language has for instance a restricted number of syllables, the number of members in the classes of central and marginal parts of syllables will be smaller than the number of syllables, and when these parts are further partitioned we find the phonemes, whose number is very small in every language. The smaller the inventory at the last analysis the simpler the description will be. We should therefore find the analysis that leads to entities of the least possible extension and the lowest possible number (OSG p. 39).

¹⁾ Cf. however, p. 20 ff. of the present.

These two points are important when we come to consider language as a *sign system* ¹⁾.

10. *Some terminology*

A few of the terms given above in the scheme on p. 74 may cause some confusion to readers who are acquainted with other works by Hjelmslev, in which they are used in a different sense.

Also the use of the terms within the frame of OSG is not quite consistent in all cases. The most striking instances within OSG are:

Relation

On p. 36 OSG this term is defined as “the both-and function” (belonging to the *text*). It might be expected to have been used in this sense from p. 36 onward, but on p. 66 OSG it is again used in its ordinary sense, if I understand it right: on this page it is said that we must “register the *relation* between expression correlation and content correlation (which belong to the *system*, BS) for all entities in both planes”.

Solidarity

Vogt draws the attention to a discrepancy in the use of this term. Hjelmslev first defines it as “Interdependence between terms in a *process*” (OSG p. 23), so it is, as Vogt says: “un terme appartenant à la syntagmatique” ²⁾. But on p. 44 Hjelmslev speaks of the “solidarity” between the function and its functives, between the sign-function and its two functives: expression and content, between expression and content, so as belonging to the *system*. “Faut-il entendre” — asks Vogt — “ce terme dans le sens défini, ce qui serait surprenant, ou bien dans le sens non technique du mot”? (p. 97). Indeed I believe that is what is meant, and Hjelmslev would have done better to use the term ‘interdependence’ in the last few cases, which at any rate is a more general term being applicable to both process and system.

Determination

This is one of the words that has undergone a change of meaning

¹⁾ See p. 126 ff. On p. 67 it was pointed out that there is a conflict between the two requirements.

²⁾ Vogt, *Review OSG* p. 96.

in Hjelmslev's usage. In 1936 we come across it in *Essai d'une théorie des morphèmes*¹⁾, where it is defined as "la fonction obligatoire: l'une des deux catégories entrant dans la fonction appelle nécessairement l'autre, et/ou inversement". So it is a common term for the two functions which later in the same paper Hjelmslev distinguishes as "détermination unilatérale" and "détermination bilatérale". For the latter (the mutual dependence in which the one term presupposes the other *and vice versa*), OSG has the new term 'interdependence', reserving 'determination' for the 'détermination unilatérale' of 1936²⁾, the unilateral dependence in which the one term presupposes the other but *not vice versa* (OSG p. 23) (1936: *or vice versa*).

The matter is made more complicated because also OSG gives a common name for 'interdependence' (1936 'détermination bilatérale') and 'determination' (1936: 'détermination unilatérale', viz. 'cohesions'³⁾): "the two functions among whose functives⁴⁾ appear one or more constants" (OSG p. 33). ("A *constant* is a functive whose presence is a necessary condition for the presence of the functive to which it has a function" OSG p. 32).

Combination

This word has undergone a somewhat confusing change of meaning. In *Essai d'une Théorie des Morphèmes* of 1936 the word 'combinaison' is defined as "la fonction facultative", so in general there is a combination "si l'appel (des deux catégories) n'est pas nécessaire, ni de l'un, ni de l'autre côté" (p. 142). Now for this general case, for a bilateral facultative function in the process as well as in the system, OSG has the name 'constellation' "a function between two variables" (OSG p. 32). (A variable is "a functive whose presence is not a necessary condition for the presence of the functive to which it has a function" (OSG p. 32).

The word 'combination', however, is also used in OSG, but here

¹⁾ Actes IV congrès intern. de linguistes, 1936.

²⁾ This is also done in 1942: *Langue et parole*, Cahiers F. de Saussure, 2, '42, p. 31; and in 1939: *La notion de rectiōn*. Acta linguistica I, '39, p. 21.

³⁾ Thus Whitfield translates the Danish 'konnexion'. I would have preferred to use for it the English 'connection', but in the table of functions at the end of Ch. 11. Whitfield adds Uldall's term 'connexion' in parentheses to the word 'relation', I do not know his reasons for the Danish text gives only 'relation' in that place, but to avoid any more ambiguity I will follow Whitfield in translating Hjelmslev's 'konnexion' by 'cohesion', and Hjelmslev's 'konnexe' by 'cohesive'.

⁴⁾ For the term 'functive' see p. 87 of the present.

it is reserved for a constellation (1936 'combinaison') in the *process* only, while 'autonomy' is given for the same function in the system (OSG p. 24).

Schematically represented the names that have been given to the three general functions — in both process and system — are these:

$$\begin{array}{l}
 1943: \\
 \text{Cohesion} = \left\{ \begin{array}{l} 1943: \text{Interdependence} = 1936: \\ \text{Détermination bilatérale} \\ 1943: \text{Determination} = 1936: \\ \text{Détermination unilatérale} \end{array} \right\} = 1936: \text{Dé-} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \text{termination} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad 1943: \text{Constellation} = 1936: \text{Combinaison.} \\
 \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad (= \text{autonomy} + \text{combination})
 \end{array}$$

Exist

This is another term one would have liked to have had defined. It must have a special sense in Hjelmslev's usage, for when he says e.g. that a preposition cannot exist without an object (OSG p. 25), one immediately thinks of cases like: "With or without?" a question often asked at the tea-table. Or I think of a grammatical construction like "This is something I cannot do without"; "this is the knife I cut the apple with". When making the above assertion Hjelmslev must have had the idea of "catalysis" (OSG p. 61) in mind already — a further discussion of this point will therefore follow in the chapter on Catalysis. (X).

Presence

The same applies to the use of the word 'presence' in Hjelmslev's definitions of 'constant' and 'variable' (p. 32 OSG): "A functive¹⁾ whose presence is a necessary condition for the presence of the functive to which it has a function" (p. 21 OSG). In the light of Hjelmslev's idea of catalysis I do not think the words 'exist' and 'presence' can safely be considered as "non-specific indefinables". In the examples mentioned above (under 7) at least, the objects of the prepositions cannot be said to exist or to be present *in the text*. If they are nevertheless to be considered as present in the text, another question rises at once:

¹⁾ See p. 87.

What does Hjelmslev understand by a text? This question too will be further considered in the chapter on Catalysis ¹⁾).

Realized-virtual

What Vogt says concerning Hjelmslev's definition of realization: "... la possibilité de donner une définition purement formelle de la notion de réalisation (... ne me paraît pas évidente" applies to an even greater degree to his term 'virtual': A class is virtual if it cannot be taken as the object of a particular analysis (OSG p. 37).

A particular analysis is an analysis that can be performed on a given object but not on any other object (id.).

The difficulty is that in the definition of '*virtual class*' there are two conditions that can be made negative, thus resulting in three possibilities: A class is virtual if it can *not* be taken as the object of "an operation that can be performed 1. on a given object but 2. *not* on any other object". The three possibilities resulting from these definitions for a virtual class are:

A. It is the only object on which a given operation cannot be performed (negation of 1.), on any other object the operation can be performed (negation of 2.).

B. It is the object on which a given operation cannot be performed, which operation cannot be performed on any other object either (negation of 1. only). For practical reasons this possibility can be ruled out.

C. It is the object on which a given operation can be performed, which can also be performed on any other object (negation of 2. only). This, however, is what I believe Hjelmslev would call a 'universal class'. At least he calls an operation 'universal' when it can be performed on any object whatsoever. A universal operation, then, seems to concern not only objects which are "present as realized" (in the ordinary sense), but also virtual, in the sense of 'possible', objects. In that case we might distinguish between a 'realized' and a 'virtual' class by saying that a realized class can be made the object of a universal as well as of a particular operation, a virtual class only of a universal operation. So that we have to accept C. as the right definition for a 'virtual class', and have to discard A. as a definition logically implied in Hjelmslev's definition but not meant by him to be implied. If after all he intended that it should be implied we should need another new term to enable us to distinguish between a virtual class that can be the object of a universal analysis and a virtual class with which this is not the case.

¹⁾ See also p. 19.

CHAPTER V

FUNCTION, FORM, AND THE FUNCTIVES

1. *Function*

Hjelmslev rightly signalizes the ambiguity that lies in the term “function” as it has hitherto been used in science, “where it designates both the dependence between two terminals and one or both of these terminals — the latter when the one terminal is said to be “a function of” the other” (OSG p. 32). To avoid this ambiguity in modern terminology Hjelmslev introduces the technical term “functive” to denote the terminal of a function, reserving “function” for “the dependence between two terminals” only, no longer using it for those terminals themselves¹⁾. In this way he goes back, rightly, in my opinion, to the old analysis of the notion of relation (*relatio-fundamentum-terminus*).

The term ‘functive’ has immediately been taken over by the Copenhagen circle and will no doubt find its way further into present-day linguistics. For the same reason Hjelmslev rightly replaces the saying that “one functive *is* a function of the other” by the phrase that “one functive *has* a function to the other”. The English language especially, with its strong tendency to ‘concretize abstract nouns’ could do with a few more of such distinctions for scientific use.

Meanwhile this usage of the term ‘function’ means also a change from Hjelmslev’s own former usage. In 1938, for instance, he defines ‘function’ as “a direct dependence of any kind”²⁾, in which the double meaning of ‘dependence’³⁾ is of course responsible for the different usage in two almost successive sentences, the first saying that the syllable is a function of accent, the second that the accent *has* a function in two respects. As late as 1939 (*La Structure Morphologique*) we find phrases

¹⁾ See also Miss Fischer-Jørgensen on the term ‘function’, in *Phonemics*, Archiv f. Vergl. Phonetik, V, 1951, pp. 170–200, esp. p. 22 (English translation).

²⁾ *The Syllable as a Structural Unit*. Proceedings III Intern. Congr. of Phonetic Sciences, 1938, pp. 266–272.

³⁾ The being dependent – the thing that depends.

like "une valeur *est* fonction de la catégorie à laquelle elle appartient" (p. 70). "Tout fait de langue *est* par définition fonction du signe; la méthode apriorique consiste à le considérer comme *étant* fonction d'autre chose" (p. 74 italics mine). In the same article we find an interesting transitional expression: un réseau de fonctions qui *sont en fonction* les unes des autres" (Thèse VI, italics mine). In "*La Notion de Rection*" of the same year this phraseology occurs again: "Catégorie et rection sont donc *en fonction* l'une de l'autre" (p. 14), and "La *relation* ou fonction syntagmatique et la *corrélation* ou fonction paradigmaticque *sont en fonction* l'une de l'autre" (p. 22, italics mine).

In spite of the above usage, Hjelmslev has always meant to attach to the word 'function' the relational meaning described in OSG. This appears from his definitions:

1928. In '*Principes*' there occurs a more specialized, though already entirely glossematic definition of "fonction grammaticale", viz. 1. la faculté de se combiner exclusivement avec certains morphèmes donnés 2. la faculté de se combiner avec les autres sémantèmes exclusivement au moyen de certains morphèmes donnés" (p. 123). "Selon nous, la fonction grammaticale est une espèce de *forme*" (id.). But Hjelmslev explains this 'form' further by saying that only semantemes can have a function, morphemes¹) cannot, that is why they cannot occur independently (p. 124). Suppose a semanteme has the function of a subject; this means: it can be combined with a verb in such a way that this verb must agree with it in person, number and gender. Also: if we say a substantive is feminine "cela veut dire qu'il se combine avec les autres sémantèmes exclusivement au moyen de certains morphèmes donnés" (p. 124). Wordorder can be included in grammatical function, or rather "l'ordre des éléments". Therefore there should no longer be a division of grammar into morphology and syntax (p. 125).

Hjelmslev distinguishes "la fonction grammaticale" from "l'emploi": "l'emploi ne concerne pas la forme Il entre dans les cadres de la signification". An adverb may for instance be used as an interjection, but this does not change the grammatical function of this element; or a certain semanteme may be used as a hyperbole, metaphor, periphrase, without changing its grammatical function (p. 126).

Besides the 'fonction grammaticale' Hjelmslev distinguishes the 'fonction phonique': "la faculté de se combiner exclusivement avec certains phonèmes donnés" (e.g. *k* can be preceded

¹) The glossematic term 'morpheme' is not used in the Prague and Anglo-Saxon sense: it does not include radical elements. See further p. 212.

by η but not by n). In general Hjelmslev defines the "*fonction linguistique*" as: "*la faculté d'un élément de se combiner exclusivement avec certains autres éléments donnés*" (p. 127).

1935. In "*Etudes de linguistique structurale*"¹⁾ Hjelmslev and Uldall write: "les glossèmes sont définis exclusivement par leur fonction, c.à.d. par leurs relations syntagmatiques" (p. 15).

1936. The "*Essai d'une théorie des morphèmes*"²⁾ gives already the same definition as OSG: "(Une fonction est) une dépendance satisfaisant aux conditions d'une division; 'fonction' est donc plutôt synonyme de 'relation' dans l'usage ordinaire de la langue". "Chacun des glossèmes et chacune de leurs catégories est défini par sa *fonction*, c'est à dire par ses *rapports syntagmatiques possibles*". Here 'function' and 'rapport' are taken as synonyms, whereas in a later work they are distinguished as two different kinds of relations (1939: *Struct. Morph.* p. 67).

1938. "*The Syllable as a structural unit*" gives for 'function': "a direct dependence of any kind"³⁾; but in the same year it is restricted again to a *syntagmatic* dependence in "*Über die Beziehungen der Phonetik zur Sprachwissenschaft*"⁴⁾, which defines "Funktion" as "eine syntagmatischen Beziehung, eine Beziehung zwischen zwei Elementen in derselben Kette" (p. 217). "*Neue Wege der Experimentalphonetik*" of the same year speaks of "die gegenseitige Abhängigkeit von Inhalt und Ausdruck" between "Inhalt und Ausdruck" "(besteht) eine Funktion im mathematischen Sinne" (p. 153)⁵⁾.

1939. In "*La Structure Morphologique*"⁶⁾ 'function' is a dependence; but here two kinds of 'dependances' are distinguished, viz. "fonctions" and "rapports". "Fonctions" are "(les) dépendances qui ne sont pas purement dépendantes". For instance Fr. imparfait indic. means either a 'passé imperfectif' or an irrealis, this fact constitutes in French a dependence between these two meanings, "mais cette dépendance n'existe qu'en vertu de la dépendance séparée entre chacune de ces significations et l'imparfait de l'indicatif. Ce qui réunit les deux significations, c'est la forme grammaticale et rien de plus. Il suffit donc de constater la dépendance entre l'imparfait indicatif d'une part, les deux significations de l'autre, pour que l'on soit à même de déduire immédiatement la dépendance qui se trouve entre les deux significations". It is the first dependen-

¹⁾ L. Hjelmslev and H. J. Uldall, *Etudes de linguistique structurale organisées au sein du Cercle Linguistique de Copenhague*. Bulletin du Cercle Linguistique de Copenhague II, 1935, p. 13-15.

²⁾ Actes IV Congrès International des Linguistes, 1936, p. 35.

³⁾ Proceedings of the Third International Congress of Phonetic Sciences, 1938, p. 266-272.

⁴⁾ Archiv für Vergleichende Phonetik II, 1938, p. 129 ff.

⁵⁾ Nordisk Tidsskrift for Tale og Stemme, 2e Aargang, 10, Juni 1938, p. 153 ff.

⁶⁾ Rapports V Congrès Intern. des Linguistes, 1939, p. 66-93.

ce that Hjelmslev calls 'fonction', the other he calls "rapport" (p. 67).

In "*La notion de rection*"¹⁾ of the same year we find again: "la structure d'une langue est un réseau de fonctions (de dépendances)" (p. 11).

1941. In "*De grammatiske katogorier*"²⁾ 'function' has about the same meaning as "styrelsesforholdene" (facts of grammatical 'government') (p. 15).

1942. "*Langue et Parole*"³⁾ gives for "structure": "un tissu de dépendances ou de fonctions (dans l'acception logico-mathématique de ce terme)" (p. 31).

In 1943 OSG gives the very general definition of 'function' as "a dependence that fulfils the conditions for an analysis" (p. 31). No longer only the "logico-mathematical" but also a bit of the "etymological" sense is attached to it now: that an entity has a function means 1. that it has dependences with other entities, that certain entities premise others; 2. that it functions in a definite way, fulfils a definite role, assumes a definite "place" in the chain (p. 31). (It seems to me as if the last property belongs more to the logico-mathematical sense than to the etymological).

1948. In *Acta Linguistica IV* Hjelmslev seems to neglect the etymological sense again in speaking of the functional conception of language "qui voit dans les fonctions (dans le sens logico-mathématique de ce terme), c.à.d. dans les dépendances, le véritable objet de la recherche scientifique" (p. VIII)⁴⁾.

The definitions show that throughout Hjelmslev's work the term 'function' can safely be taken in the very general sense of 'relation', as Hjelmslev himself says in *Essai d'une théorie des morphèmes*, quoted above. We should not forget, however, that he adds there that the word 'relation' in that case should be taken "dans l'usage ordinaire de la langue", so not in the sense it has in OSG (p. 35), where it is used as a designation for the "both — and function" and where it has therefore a "narrower meaning" — as Hjelmslev says too — than it has in logic, where 'relation' is used essentially in the same sense in which we use the word "function" (OSG p. 35)⁵⁾. Hjelmslev's 'function' may therefore be said to include everything that he has up to now designed by

¹⁾ Acta Linguistica I 1939, p. 10-23.

²⁾ Translatoren III 1941, p. 8-16.

³⁾ Cahiers F. de Saussure 2, '42, p. 29 ff.

⁴⁾ Editorial. Acta Linguistica IV, 1944, p. V-XI.

⁵⁾ See, however, p. 83 above.

different names such as 'rection', 'direction', 'concordance', 'rapport', 'dépendance' etc.

2. *Form*¹⁾

In 1928 (*Principes*) the importance of grammatical *form* is brought forward: "une catégorie qui n'est pas fondée sur des critères de forme ne saurait pas lui (= la grammaire) appartenir" (p. 28). But the 'form' seems still to include here the form of the 'parts' themselves into which the text is divided, their outward, visible or audible form, their 'shape', not only their relations to other 'forms'.

Sentences and their 'terms' (subject, predicate, etc.) if they are to have a linguistic value, says Hjelmslev, should be studied from the morphological side, not from the semantic side (*Principes* p. 37). On the other hand: "Les sons ne sont que le matériel d'une langue le matériel pour construire *les formes, les mots, les syntagmes*, qui sont des signes, des expressions de notions. La notion de *valeur* est inexistante dans le système des sons" (p. 49). On p. 94 we can recognize a tendency towards the OSG idea of 'form': every fact of syntax is a fact of morphology because it only concerns grammatical *form*, and every fact of morphology is a fact of syntax because it only rests on a syntactical relation between the grammatical elements in question. Grammar is *one* theory, "la théorie de la *forme*, tout court". *Only* the parts of words, the semantemes and morphemes, in their mutual *relations* are important, grammar can do without the concepts of 'word' and 'phoneme' (p. 99, 100). Then again we find Hjelmslev taking over Séchehaye's abstract definition of 'forme' grammaticale: "la forme grammaticale, abstrait et algébrique, est le système des idées-symboles (des sémantèmes et des morphèmes). La forme est constituée par le fait que ces idées-symboles sont classés dans notre esprit dans certaines catégories" (p. 112). Thus we find on p. 113 'la forme' explained as "les catégories grammaticales", not those in a certain language for "la forme même revêt un aspect différent. Les procédés sont conventionnels, la forme seule ne l'est pas" (p. 114). On p. 116, 'forme' is "tout ce qui, dans le signe, est directement tangible à l'exclusion de tout ce qui y est conventionnel". "La forme fait partie du signifiant et non du signifié. Ce fait est capital. La linguistique même est à ce prix" (p. 116)²⁾.

P. 122: "ce ne sont donc pas les phonèmes qui constituent les

¹⁾ See the preliminary discussion of 'form' on pp. 7 ff, 21 ff. of the present.

²⁾ This statement is taken back in OSG, p. 68.

catégories grammaticales. C'est, bien au contraire, la construction même". Jespersen's example is quoted: 'sheep' in English is plural because it combines with 'many', the phonemes of the word do not show it. This exclusion of the wordform itself, of the 'shape' of the word, I would say, is contrary to what the title of the chapter in question states: "La construction fait *partie* de la forme". It is also contrary to what is said about 'forme' on the preceding page, the one just quoted: "Il faut comprendre par *forme* non seulement la forme du signe même, pris isolément, mais également la forme qu'impose le signe à la série articulatoire dont il fait partie" (p. 121). The same on p. 123: "Selon nous, la fonction grammaticale est *une espèce de forme*" (italics mine).

Yet, although in *Principes* Hjelmslev still recognizes three kinds of grammatical categories, he emphasizes already that the "functional categories" are the most important: "Les catégories fonctionnelles constituent, par rapport aux catégories de morphèmes et aux catégories de sémantèmes, la partie essentielle de la théorie grammaticale" (p. 203). The categories of semantemes form a peripheral field apart, and the categories of morphemes "n'ont d'existence ... que par les catégories fonctionnelles" (id.). "Une catégorie de morphèmes n'existe que parce qu'elle est à la base d'une ou de plusieurs catégories fonctionnelles" (p. 204).

In *Principes* we also find already the idea of "le système abstrait" which is "un système de possibilités et de conditions" (p. 267). To establish the categories in that system we must "établir une catégorie abstraite correspondante à chaque catégorie concrète, sans tenir compte, au préalable, de son étendue ... L'existence d'une catégorie dans un seul état concrète suffit, en principe, pour conclure que cette ... catégorie existe comme possibilité dans les bases psychologiques du langage. La catégorie abstraite n'est rien qu'une *possibilité abstraite*" (p. 271). But we must be careful not to make premature identifications; and Millardet is quoted on p. 275: "l'analyse du détail est la condition préalable de toute synthèse scientifique" (See pp. 43 ff. of the present). And then there follows a very important statement concerning the "Fondation de la théorie des catégories fonctionnelles" (Ch. V p. 296). It is remarkably similar to the conclusion drawn by the present writer from OSG about Hjelmslev's method of establishing linguistic theory (p. 49, 50). In OSG the few

indications in this direction are indistinct and blurred by the stress that is laid on the 'undivided text' as the only starting-point of analysis, but in *Principes* we find the method described very clearly and very outspokenly. Here Hjelmslev states that, although the functional categories are the basis of all grammatical work, the theory of these categories premises again a great deal of detail work, which in its turn premises a *provisional theory* as startingpoint. And as to this startingpoint, Hjelmslev agrees with Séchehayé, quoting him on p. 297: "*En attendant mieux, la grammaire scolaire constitue toujours le fonds commun des idées dont on part pour chercher par la discussion à les approfondir et à les corriger*". This is what Hjelmslev does too in *Principes* and only *afterwards* does he attain in *Principes* definitions of the kind of OSG, 'relational definitions' such as: Nom = un sémantème susceptible de morphèmes de cas; Verbe = un sémantème non susceptible de morphèmes de cas (p. 316).

Thus, from *Principes* it is not quite clear what Hjelmslev means by 'form' nor whether he already believes in the all-importance of 'dependences'. The book gives many entirely different statements on the subject, but two conclusions seem to be more or less warranted. Firstly: 'form' in *Principes* refers only to the expression, not to the content (cf. quotation from p. 116 above).

Secondly: there is a definite tendency, especially towards the end, to put all the stress on the 'relational' form of words, on their function in the sense of 'dependence'; still the 'morphological form' of words, their 'shape', is as yet not neglected.

In *On the Principles of Phonematics* of 1935 we find Hjelmslev's present view: he calls the 'form' of a unit: "the *place* occupied by this unit in the language *system*" (p. 50). "The form is defined by the *value* ¹⁾, i.e. by the differential minimum of content ²⁾ necessary to keep this unit apart from other units of the same sort. The value depends on the oppositions" ³⁾.

¹⁾ In many of the quotations given on the following pages the influence of de Saussure's concept of *valeur* (*Cours* p. 153 ff) will be easily recognized.

²⁾ "Content" is here used in a sense entirely different from that in later glossematic publications, viz. as "a functional destination": also a phoneme is said to have a content (p. 50).

³⁾ A formal definition means e.g. that the element *p* in Danish is not defined as a lip-plosive sound, but as an element which can stand at the beginning of consonant groups at the beginning of a word. (Eli Fischer-Jørgensen, *Nordisk Tidsskrift for Tale og Stemme* VII, 2-3, 1943, p. 90).

This view is very clearly expounded in *Neue Wege der Experimentalphonetik* (1938): "Die Definitionen und die Erkenntnis der Einheiten und der Kategorien der Sprache können und müssen stattfinden ohne jede Rücksicht auf den Stoff, worin sie sich manifestieren. Da die Einheiten und Kategorien nur funktioneller Natur sind, sind sie also weder semantischer noch lautlicher Natur. ... Den Bedeutungen und den Lauten gegenüber sind die sprachlichen Einheiten stofflose Formen. Die ganze Struktur, welche das Sprachsystem ausmacht, ist nur ein Netz ¹⁾, das über die Begriffswelt und über die Lautwelt gelegt ist, und wodurch die Begriffswelt und die Lautwelt aufgefasst und beschrieben werden müssen. Jede sprachliche Einheit ist eine Masche in diesem Netz, und die stofflichen Größen, welche sich unter ein und derselben Masche befinden, sind Varianten unter ein und derselben sprachlichen Einheit. Wie die Maschen eigentlich nur ein leerer Zwischenraum zwischen den Fäden sind und ohne das Netz undenkbar wären, so sind auch die sprachlichen Einheiten leere Räume, welche keinen Sonderexistenz haben, sondern nur ein Ergebnis der Gesamtstruktur des Netzes darstellen, so sind auch die eigentliche Realität der Sprache nicht die Einheiten, sondern ihre Grenzen, welche auf die Begriffswelt und auf die Lautwelt projiziert werden. Durch die verschiedene Lage dieser Grenzen unterscheiden sich die Sprachen und bekommen sie ihre eigentümliche Individualität" (p. 158). This constitutes an essential feature in Hjelmslev's linguistic theory; he includes it in his definitions of Structural Linguistics: "Est linguistique structurale toute linguistique qui voit dans la langue une structure et qui fait de la structure la norme de toutes les classifications. La structure d'une langue est un réseau de fonctions (de dépendances)" ²⁾. "La linguistique structurale est un ensemble de recherches reposant sur une hypothèse selon laquelle il est scientifiquement légitime de décrire le langage comme étant essentiellement une entité autonome de dépendances internes, ou, en un mot, une structure" ³⁾. The point of the dependences is further explained when Hjelmslev says that the hypothesis "ramène son objet à un réseau de dépendances, des parties qui se conditionnent réciproquement, en considérant les faits linguistiques comme étant

¹⁾ The example of the net is used again in OSG p. 52.

²⁾ L. Hjelmslev, *La notion de rection*, Acta Linguistica I 1939, p. 10, 11.

³⁾ L. Hjelmslev, *Editorial* – Acta Linguistica IV, 1944, p. V.

en raison l'un de l'autre ¹⁾. Par là elle s'oppose à toute hypothèse qui énonce ou qui présuppose l'existence de 'faits' précédant logiquement les rapports qui les réunissent. Elle nie l'existence scientifique d'une substance absolue, ou d'une réalité qui serait indépendante des rapports. Elle veut qu'on définisse les grandeurs par les rapports et non inversement" ²⁾.

"The structural approach to language is a scientific description of language in terms of relations between units, irrespective of any properties which may be displayed by these units but which are not relevant to the relations or deducible from the relations" ³⁾. In this article Hjelmslev quotes Carnap according to whom a scientific statement must always be "a statement about the relations without involving a knowledge or a description of the relata themselves". Hjelmslev applies this to language and continues: "It is obvious that the description of a language must begin by stating relations between relevant units, and these statements cannot involve a statement about the inherent nature, essence or substance of these units themselves. This must be left to phonetics and semantics, which accordingly presuppose the structural analysis of the language pattern. But also phonetic and semantic statements must be structural statements, in terms of relations, of form, and not of substance". Conclusion: "Linguistics describes the relational pattern of language without knowing what the relata are, and phonetics and semantics do tell what those relata are, but only by means of describing the relations between their parts and parts of their parts" ⁴⁾.

By way of example I take over two instances of glossematic analysis given by Uldall, one from a non-linguistic field of the "humanities", one from language. To understand it it should be known that if there is a connection between two units *a* and *b* this is represented by a dot: *a. b* ⁵⁾; that the minus before a

¹⁾ Following de Saussure, Hjelmslev has stressed strongly the fact of the very close relation there is between all the features of a language, which is proved again and again by practical linguistics, cf. Nida: "No part of a language can be adequately described without reference to all other parts" (*Morphology*, 1949, p. 2).

Cf. Brøndal: "Si la langue est un système de signes, les classes doivent également former, dans un état de langue donné, une totalité dont chaque membre prend son existence et sa valeur du fait de ses rapports avec les autres membres" (*Ordklasserne*, French summary p. 237).

²⁾ *Editorial* - Acta Linguistica IV, 1944, p. VIII.

³⁾ L. Hjelmslev, *Structural Analysis of Language*. Studia Linguistica I p. 69 ff.

⁴⁾ *Structural Analysis of Language*, Studia Linguistica I, 1947, p. 69-78.

⁵⁾ For the symbols see W. E. Collinson, *Some Recent Trends in Linguistic Theory with Special Reference to Syntactics* (Lingua I, 3, 1948, p. 316).

unit denotes that the unit does not occur; and that the minus over a unit denotes that in a certain group a unit is absent which is present in another group, the number of "negative units" depends on the number of positive units in the largest comparable chain: if there is a chain $abcde$, then ac must be written $a\bar{b}c\bar{d}\bar{e}$. Further, if ab and ac occur, this may be represented by: $a. (+b + c)$. (b and c are said to be *equivalent* in respect of the connection). Now these are the examples:

"It sometimes happens that correspondence and equivalence go together in one part of the material but not in another. In a certain school the masters used to be divided into three classes: *a*) junior masters, who were not allowed to marry, *b*) senior masters, who were allowed but not obliged to marry, and *c*) the head master, who was, in fact, always married, though I am not sure that he was obliged to. The three classes were differentiated in other ways, too — by pay, social status, etc., all of which we can sum up in the three symbols a, b, c . Including a few widows who were also about, and letting m stand for *master* and w for *wife*, the actual occurrences were as indicated by the following assertions and negations:

- a.* $(-mw + m\bar{w} - \bar{m}w)$
- b.* $(+mw + m\bar{w} + \bar{m}w)$
- c.* $(+mw - m\bar{w} + \bar{m}w)$

(It will be seen that a vacancy would mean $+m\bar{w}$, and no vacancy $-m\bar{w}$, in each class).

The four chains, $m.w, m.\bar{w}, \bar{m}.w, \bar{m}.\bar{w}$, correspond, since their terminals are the same or negatives of the same, but the assertions and negations are differently distributed in respect of the three connections with a, b , and c .

And a linguistic example: suppose that there is a language with the consonants p, t, k, s, r, l , that its syllabic themes have the structure $CnVC$, and that the following consonant clusters occur: $spr, skl, sp, st, sk, pr, tr, kr, pl, kl$; all the consonants occur alone both initially and finally. We then have the following assertions and negations in respect of initial (*i*) and final (*f*) connexion with the vocalic unit:

- | | |
|---|---|
| <i>i.</i> $(+spr + skl - spl - str - skr$
$+ sp\bar{r} + sk\bar{l} + sp\bar{l} + st\bar{r} + sk\bar{r}$
$- s\bar{p}r - s\bar{k}l - s\bar{p}l - s\bar{t}r - s\bar{k}r$
$+ s\bar{p}\bar{r} + s\bar{k}\bar{l} + s\bar{p}\bar{l} + s\bar{t}\bar{r} + s\bar{k}\bar{r}$
$+ \bar{s}pr + \bar{s}kl + \bar{s}pl + \bar{s}tr + \bar{s}kr$
$+ \bar{s}p\bar{r} + \bar{s}k\bar{l} + \bar{s}p\bar{l} + \bar{s}t\bar{r} + \bar{s}k\bar{r}$
$+ \bar{s}\bar{p}r + \bar{s}\bar{k}\bar{l} + \bar{s}\bar{p}\bar{l} + \bar{s}\bar{t}\bar{r} + \bar{s}\bar{k}\bar{r}$
$- \bar{s}\bar{p}\bar{r} - \bar{s}\bar{k}\bar{l} - \bar{s}\bar{p}\bar{l} - \bar{s}\bar{t}\bar{r} - \bar{s}\bar{k}\bar{r})$ | <i>f.</i> $(-spr - skl - spl - str - skr$
$- sp\bar{r} - sk\bar{l} - sp\bar{l} - st\bar{r} - sk\bar{r}$
$- s\bar{p}r - s\bar{k}l - s\bar{p}l - s\bar{t}r - s\bar{k}r$
$+ s\bar{p}\bar{r} + s\bar{k}\bar{l} + s\bar{p}\bar{l} + s\bar{t}\bar{r} + s\bar{k}\bar{r}$
$- \bar{s}pr - \bar{s}kl - \bar{s}pl - \bar{s}tr - \bar{s}kr$
$+ \bar{s}p\bar{r} + \bar{s}k\bar{l} + \bar{s}p\bar{l} + \bar{s}t\bar{r} + \bar{s}k\bar{r}$
$+ \bar{s}\bar{p}r + \bar{s}\bar{k}\bar{l} + \bar{s}\bar{p}\bar{l} + \bar{s}\bar{t}\bar{r} + \bar{s}\bar{k}\bar{r}$
$- \bar{s}\bar{p}\bar{r} - \bar{s}\bar{k}\bar{l} - \bar{s}\bar{p}\bar{l} - \bar{s}\bar{t}\bar{r} - \bar{s}\bar{k}\bar{r})$ |
|---|---|

On the complicatedness of the algebra as compared with the simplicity of the example see p. 66 of the present: there are many much more complicated systems to be described than this and "our aim is to provide one method which can be applied to any material, regardless of degree of complexity" (*Outline* p. 55, 56).

It is difficult to imagine to oneself how a scheme would look in which more combinations of more elements are described; yet Uhlenbeck gives a very clear and elucidating example of such a description together with frequency numbers in his paper on *The Structure of the Javanese Morpheme*, (*Lingua* II, 3, p. 239–270. See especially the three diagrams attached (p. 270)).

With Uldall's list of eighty possibilities for six consonants — and that only as far as initial and final position is concerned and provided the largest clusters are three consonants — we can describe any language as far as the initial and final grouping of six of its consonants is concerned, when it has no larger clusters than those of three consonants, by merely putting the pluses and minuses in the right places. We could number the various possibilities, and thus we should obtain a typology of every language, when such schemes were filled up for all the elements of every language: Language I realizes the relations 1, 4, 6, etc.: language II the relations 4, 5, 8, etc.

This typology could indeed be given without any recourse to the substance of expression of the units of the relations registered — *on two conditions*:

a) that the various relations registered for every language have first been found^a — and — they can only be found by means of their *substance* ¹⁾.

b) that the registration of these relations, found by trial and error, is assumed to *have been correct at once*.

We must not lose sight of the fact that the *general* system of all possible relations is established on a calculation of possible *relations of units-found-by-trial-and-error*. Uldall expresses this by saying that "the first deduction is necessarily blind, since an object is amorphous until it has been reduced to a structure through a procedure; whatever we may "know" of the object from other sources must be rigorously excluded, however hard

¹⁾ See p. 101 ff. and Introduction p. 24 ff.

it may be to do so" (*Outline* p. 32)¹). Uldall does not say why we should exclude whatever we may 'know' of the object from other sources. Why should we exclude, for instance, what we *know* from experience: that we use the word 'cat' to talk about a cat? In practice this knowledge is not excluded by Uldall either: he has recourse to it in the commutation test, which, he says, must be used *on all levels* of the analysis. However, the objection raised above to his conclusion also applies to his following statement, that the second "deduction is ... no longer blind", being "a description of the text as described by the first procedure": this no-longer-blind deduction, based as it would be on the description of a text by a *blind* deduction, would only have the value that the latter had.

However, the formal definition in the glossematic sense means more than defining the units by their positions, as is made clear by Miss Fischer-Jørgensen's examples given in her *Washington Lecture on Glossematics* (1952, p. 8, stencilled) and in her paper *On the Definition of Phoneme Categories* in *Acta Linguistica* of the same year (VII, p. 13, 14). The defining by means of the relations of an element is carried through to the relation between an element and its position. If an element occurs only in initial position in a syllable, it can be said to "select" this position, and the element can be defined in this way²). We should not use "positional terminology" and say that *r* is initial or final: "consonants are divided into presupposing and presupposed, and if there are syllables of the type CV and CVC, but not VC, then the initial position is presupposed (by the consonants, BS) (and consonants entering into this position alone can be so defined)" (*Washington Lecture on Glossematics*, p. 8).

"... Even if two languages possess consonants both in the

¹) Bazell, however, rightly remarks in general that "indeterminacy is not to be avoided by the exclusion of certain levels of criteria; on the contrary it is the *convergence of a large number of criteria* which makes this indeterminacy less than it might be" (*Phonemic and Morphemic Analysis*. Word, 8, 1952, p. 34, 35).

²) Here, too, the danger seems to be not imaginary that the description of utterance structures of any language would come to look like Harris's final statement on the utterance structure of Yawelmani, which, according to H. V. Velten, "presents the discovery that such an utterance begins with an initial element, continues with one or several medial morphemes - ... - and ends with a final morpheme!" "Is it naive" - Velten continues - "to postulate that an adequate linguistic description should enable one to use the language in question?" (H. V. Velten, Review of: *Harry Hoyer and Others, Linguistic Structures of America*, Word, III, 1947, p. 151).

traditional and in the glossematic sense (i.e., defined as presupposing vowels, BS), their subcategories may be differently defined by the two methods. Suppose e.g. that one language has the syllabic types V, CV, CVC (i.e. final position presupposing initial position (of the consonant, BS)), another V, VC, CVC (initial position presupposing final position ...) and a third V, CV, VC, CVC (with free combination between the positions), and all have the consonants *p, t, k*, occurring exclusively in initial position: then, when the categories of consonants are defined by their positions, *p, t, k* will belong to the same category in the three languages if the positions are identified on a phonetic basis, but from a formal point of view *p, t, k* will belong to differently defined categories in all three languages" (Acta Linguistica VII, p. 13, 14). "*Thus, not the actual position, but the relations are decisive.* The discrepancy of form and substance is not considered a drawback, but a characteristic of the language in question" (*Washington Lecture on Glossematics*, p. 8, italics mine).

Miss Fischer-Jørgensen adds that the method she follows in her paper (Acta Linguistica VII) "is in a certain sense a hybrid method, since the elements and the relations are chosen, for the purpose of comparison, on the basis of phonetic similarity" (p. 14). It might have been added that this will always have to be the procedure followed in linguistic analysis, for, as she herself says: "commutation and identification must involve substantial considerations if the analysis is to be of any use" (p. 12, note 3). And a system of units thus obtained must also itself "involve substantial considerations". If "not the actual position, but the relations are decisive", it should be remembered that those relations are based on the various *positions*; that these positions are: the positions in the *syllable*; and that the syllable is a *phonetic* concept (p. 16).

3. *The functives*

In the preceding section the development was traced and an elaboration was given of the basic principle of glossematic theory, that the larger and smaller elements of language exist only by virtue of their dependences: that "*functives*" exist only as terminals of their *functions*.

The functions having had their portion of attention, the present

section will deal with the *functives*: in spite of the glossematic theory of the all-importance of the *functions* it still seems possible to deal with the functives separately. The separation will not be complete, though, for the treatment will consist mainly in an investigation as to the validity of this basic glossematic principle.

Even if we take into account what I have called the "setting" of glossematic theory and view this principle as what it is meant to be: the basis of a final control of all linguistic analysis — even then there remain several questions about it.

If we presume that the various entities found by the commutation test are named algebraically and grouped into categories solely on the basis of the various dependencies they enter into, and if we suppose that the language in question would, in the final typology of languages, be defined only by those dependencies, it will always have to be remembered that *those very same dependencies have first of all been discovered (found^a) by means of the substance of the entities that enter into them*, — a fact which is admitted by Hjelmslev (see p. 176 of the present) ¹⁾.

That substantial differences are at the bottom also of glossematic analysis is illustrated by the following observations.

a. In the seven places on p. 22 OSG where Whitfield translates "dependences" he has not translated the other term Hjelmslev uses: *linking lines*. It is a pity that this term has been omitted from the translation, it is a less abstract word than "dependences" and a book like OSG cannot afford to lose one of its few concrete, clear terms. And it is no doubt on purpose that every time Hjelmslev uses the word "afhaengigheder", "dependences", on p. 22 he precedes or follows it up by the word "forbindelseslinier", "linking lines, communication lines"; mostly he has: "linking lines *or* dependences", once: "linking lines *and* dependences", while in the last case he leaves out "dependences" altogether, stating only that de Saussure recognized the priority of "linking lines" in language: "Alt tyder paa at Saussure har indset *forbindelsesliniernes* ²⁾ prioritet i sproget". It is these "forbindelseslinier", these "linking lines", which remind us that,

¹⁾ It seems to be forgotten again and again that "phonemic analyses are made only on the basis of discriminating phonetic evidence" (E. A. Nida, Review of R. H. Stetson, *Bases of Phonology*. Word, III, 1947, p. 133).

²⁾ Translated by Whitfield as "dependences". (Italics mine).

to determine a "line" in *language*, we must have *two points* specified. We can of course consider the 'objects' of naive realism as nothing but intersections of linking lines, but to know where those intersections are we must be given the points between which the linking lines are drawn. Linking lines link two somethings — and what are these somethings in language? If we are not given the two terms between which these linking lines are established we could not even determine our linking lines. And in language the "terms" are only recognized in their substance (see p. 24 above).

It is remarkable that a few lines further Hjelmslev drops the idea of objects as "intersections" and states that "the postulation of objects as something different from the *terms* of relationships is a superfluous axiom". There is no objection to this latter statement as long as we remember that in order to establish a relationship we must also establish the terms between which there is such a relationship. I do not deny — and it is good that Hjelmslev emphasizes this so strongly — that the terms of a relationship themselves may be further specified in detail by stating the nature of the relationship of which they are terms. But I do deny that the terms of a relationship could be entirely defined by that relationship only ¹⁾. The concept of relationship loses its sense without the concept of the terms being established as well. It goes without saying that the concept of a "term" cannot be established without its being "directed to" the other "term", i.e. without specifying the "item" by its "function". But this function, this "relation" to the other item specifies precisely the substance related as its "being a term", and qualifies the "item", the "thing", the "object", the "substance" as a "term", or — to use Hjelmslev's terminology — as a "functive". A definition of a relation, of a "function" in language, therefore, implies a "substance" anyhow ²⁾.

b. The second reason why the definition of the elements of language implies *substance* is a purely linguistic one: a linguistic form can only be recognized in its substance: if the systematical aspect was not manifested, one could not even recognize it. Of course

¹⁾ See in this connection also the quotation from Pos on p. 8.

²⁾ See p. 8 ff.

Hjelmslev admits this. "He does not hold that the forms can be recognized independently of the fact that there is a substance and that there are differences in the substance, but independently of *which* substance it is, and *which* differences are concerned. It does not matter whether one says *a* for *p* or inversely, if only the one is distinguished from the other. But Hjelmslev certainly admits that it is appropriate to consider the substance already during the form-analysis and to give the elements the same names as they will receive when a substance is assigned to them. This is already a *practical* concession. But is it no more?"¹⁾ Judging from OSG it indeed seems to be no more. That it should be more than a practical aid, however, was shown already in the Introduction (p. 8), where the remark of Prof. Wells is given that we should not only be able to establish *that* the elements differ but also *how* they differ.

c. If the idea of the independence of language of its substance is carried to extremes, and applied to practical language teaching, we get articles such as Dr A. H. King's "*Functional Approach to English Teaching*"²⁾. King works this idea out in his own way, stating that in speaking a language only *comprehensibility* is necessary; the phonemic pattern should be considered as a whole; when a person pronounces [ou] as [o:] he should not also use [o:] for e.g., [ɔ:]; when he pronounces 'coat' as [ko:t] it is all right as long as he does not also pronounce 'caught' as [ko:t]. There is a lot of truth in this, but how far does it go? What would happen if in one person's speech every English [ou] was replaced by [i:] and every [i:] by [ou]? Would there still be any comprehensibility? It is highly doubtful, certainly for spoken English. The point is of great practical importance for all language teachers. If our pupils cannot say an English *th*, with this method of teaching we could let them say a click instead, and if they have difficulties with their *r* let them keep the 'velar open' sound they are used to. And indeed, this is the answer — at any rate something like it — that King gives to the question of what we are to teach as English: "In this changing social structure . . . , it is no longer necessary for the overseas teacher of English to inculcate in his pupils habits of upper-middle-class pronunciation and the field is becoming free for an advance towards a more truly functional

¹⁾ Eli Fischer-Jørgensen, *Nordisk Tidsskrift for Tale og Stemme*, VII 2-3, 1943, pp. 91, 92, translation mine.

²⁾ Dr. A. H. King, *A Functional Approach to English Teaching*, English Language Teaching IV, 1949, nos. 1, 2.

teaching of language". . . . "One looks forward to the time when there will be a recognized Hungarian, Spanish-American, and Chinese English, just as there are now recognized Irish, Scots, Welsh, Australian and American variants of English". Weyers, in his review of this paper, calls the possibility of a "recognized Dutch English" as yet very small! ¹⁾ But this is not what Hjelmslev means: his formal description is intended for a purpose other than language teaching. King forgets that there is also such a thing as *usage*: "Est langue" — says Hjelmslev in 1937 — "une forme qui . . . est organisée dans un système qui se réalise dans une norme et se prête à un complexe d'usages dont l'un est supérieur à tous les autres" ²⁾. And it seems as if Hjelmslev overlooks that linguistic *usage*, being the only *manifestation* of the linguistic schema ³⁾, *as such* belongs to *linguistics*.

d. Diachronic linguistics offers a fourth reason to include the substance in the definition of linguistic elements. Martinet draws the attention to the importance of the substance for the *diachronic study of language*, which, after all, is not "un problème indigne de l'attention des vrais linguistes. Il ne faudrait pas qu' à l'exclusivisme des généticiens, succédât celui des synchronistes. Or s'il se révèle que c'est dans la substance, plus que dans la forme, que se trouvent les germes de l'évolution linguistique, l'établissement des structures "algébriques" des glossématiciens nous aura fort mal préparés à l'examen indispensable de la réalité diachronique" ⁴⁾.

¹⁾ C. F. M. Weyers. *Levende Talen* No. 161, October 1951, p. 344 ff.

²⁾ L. Hjelmslev. "La structure des oppositions dans la langue" 11e Congrès International de Psychologie, Paris 1937, p. 241, 242.

³⁾ OSG p. 73.

⁴⁾ A. Martinet: *Review OSG* p. 37.

"... the only condition under which a word can change, is, that the word is pronounced and therefore the only direct cause of change is the way in which the word is pronounced" (A. W. de Groot, *Structural Linguistics and Phonetic Law*. *Lingua* I, 2, 1948, p. 189).

Cf. also Sapir: "What significant changes take place in it (in language, BS) must exist, to begin with, as individual variations ... The drift of a language is constituted by the unconscious selection on the part of its speakers of those individual variations that are cumulative in some special direction" (*Language*, p. 165, 166).

"Thus a change is, at its beginning, a synchronic fact and, insofar as we don't wish to oversimplify, the synchronic analysis must encompass linguistic changes, and, vice versa, the linguistic changes may be comprehended only in the light of synchronic analysis". (*Results of the Conference of Anthropologists and Linguists*, p. 18 (Roman Jakobson)). Jakobson gives a striking example of the disappearing distinction between *e* and *i* in unstressed, pretonic position (p. 17 and 18) in present-day Russian, which may be used as a stylistic means and, when it began, could even be used "to produce the impression of being younger than one really was"!

Cf. also H. Frei, *De la linguistique comme science des lois*, *Lingua*, I, 1, p. 31.

e. M. Martinet indicates another difficulty in the *identification of the elements* ¹⁾ without the aid of the substance. He reproaches Hjelmslev that he evades the question of the "identité linguistique". "Qu'est ce qui nous permet de dire que deux mots ou deux phonèmes que nous retrouvons à quelque distance l'un de l'autre dans un texte, sont un seul et même mot, un seul et même phonème? Pourquoi le *p* de *prendre* est-il la même unité glossématique que le *p* de *pelle* ou celui de *cap*? Ce problème, pourtant central, Hjelmslev ne l'aborde pas dans son livre (*Review OSG* p. 37).

f. In a later paper Miss Fischer-Jørgensen proves that this difficulty of identification is also at the bottom of Hjelmslev's method of *commutation*. She points out that commutation and identification are not two consecutive steps but take place simultaneously: "... the statement that *p* and *t* are commutable in *pin* and *tin* presupposes the identification of the *-in* of *pin* with the *-in* of *tin*. This means that these two operations must take place simultaneously, and that the problem of dissolving the chain into phonemes consists in deciding which phonetic differences have to be considered as distinctive and which as automatic. The decision must be based on an interpretation having the purpose of describing all the facts (including the phonetic manifestation) in the simplest way" ²⁾.

And it is here that we find the only indication, in all the writings from "Copenhagen", of the 'setting' of glossematic theory, which setting is here represented as more or less a justification of Hjelmslev's rigorous views regarding the exclusion of the substance from linguistic analysis as expressed in OSG: in a note to the above paragraph Miss Fischer-Jørgensen adds: "The point of view adopted here, i.e. that commutation and identification must involve substantial considerations if the analysis is to be of any use, is not incompatible with Hjelmslev's theory in its present form. His "*purely formal analysis*" is not meant as a preliminary linguistic operation, but as a final control of the results gained in this way by trial and error" (ibid).

¹⁾ See p. 24, 100 and for a more detailed treatment, pp. 173 ff. of the present.

²⁾ Eli Fischer-Jørgensen, *On the Definition of Phonemic Categories*. Acta Linguistica VII, 1952, p. 12.

See also Hjelmslev's own latest article quoted on p. 176 of the present.

But — is this 'setting' such a justification? Does it warrant the idea of a purely formal analysis irrespective of the substance? If glossematic analysis is to be a final control this means: it is to examine whether, e.g., the table of phonemes set up for a certain language is correct, if nothing has been overlooked, if, e.g., two different speechsounds have rightly or wrongly been united into *one* phoneme. Glossematic analysis makes use of *commutation* just as the first analysis-by-trial-and-error does. And ... "*commutation ... must involve substantial considerations*" (See footnote 2, p. 104).

g. Only when we take the substance of expression: sound, into consideration does the symmetry and coherence of the system become clear to us (see p. 10). "*Oppositions*" and their suppression are the outstanding feature of this system. Hjelmslev wants to speak of 'oppositions' (for which he sometimes prefers the term "polarité") only with oppositions which are sometimes neutralized: " ... on ne saurait plus parler ni de suppression ni de neutralisation. Ces termes présupposent l'opposition; mais l'opposition ne préexiste pas à la suppression, ... au contraire, elle est *constituée* par la suppression même. Le fait primaire est la *superposition* de deux formes différentes; la superposition se manifeste en une fusion; elle a pour effet de provoquer une polarité entre les termes qui se superposent l'un à l'autre¹⁾". Only in that case, he says, do "oppositions" have a functional value: "La suppression d'une différence est due à un conditionnement fonctionnel et est en elle-même d'ordre purement formel, puisqu'elle consiste en la fusion de deux formes sans égard à la substance spécifique dans laquelle elles se manifestent. L' "opposition" par contre, considérée en elle-même et abstraction faite de sa suppression possible reste par définition un fait de substance ..." (p. 53). Also Trubetzkoy and Martinet are adduced as supporting this view. Yet, even so: "Die Unmöglichkeit, diese aufhebbaren Oppositionen weiter zu gliedern, bleibt bestehen. Die Frage, ob die so erkennbaren Neutralisationen einem gemeinsamen Prinzip gehorchen, oder je nachdem weiter unterteilt werden müssen, ist ohne die Berücksichtigung der Substanz nicht zu entscheiden. Die allein auf Grund der externen Relationen beschreibbaren

¹⁾ L. Hjelmslev, *Note sur les oppositions supprimables*. TCLP VIII 1939, p. 57.

Struktur bleibt jedenfalls eine recht grobe ... Von der aufhebba-
ren Opposition, die ganz gewiss von besonderer Wichtigkeit ist,
zur "Korrelation", durch die die feinere Struktur des Phonem-
systems wesentlich bestimmt ist, scheint mir ein wichtiger Schritt
zu sein, der aber, wie wir sahen, bei einer Umsetzung in eine
andere Substanzkategorie nicht gegangen werden kann". (Hintze
Form-Substanz, p. 97). "Auch die reine Form der Sprache,
langue, ist also letztlich von der phonischen Substanz nicht
unabhängig, wie die Qualität einer jeden nichtlogischen Gestalt
von ihrer Substanz nicht unabhängig, *ja von ihr überhaupt nicht
ablösbar ist*" (p. 99, italics mine).

Hintze characterizes the relation between form and substance
as a "hen-and egg-relation": "die Frage, was "früher" sei, ob die
Form die Substanz oder die Substanz die Form voraussetze, ist in
dieser Art eine sinnlose Fragestellung" (p. 99): there is a *mutual*
dependence between form and substance (p. 101).

It is a fact that glossematic theory really underestimates
the share of the substance itself in *bringing about a suppression*.

It is true that "la suppression d'une différence est due à un
conditionnement *fonctionnel*" in the sense that it has been made
possible by this "conditionnement *fonctionnel*". But it also needs a
"conditionnement *substantiel*" to neutralize a difference; the facts
of substance, of phonic substance, must also be such as to make a
suppression, or 'superposition' as Hjelmslev calls it, possible.
'Superposition': putting one element over another, making them
overlap, is only possible when the two elements are near enough,
so to say, — and I take this 'near-ness' in a very concrete and
"substantial" sense, viz. from the point of view of the origin of
the sound-substance: *articulation* ¹⁾).

That is why it is so often seen that *t* and *d* or *s*, *p* and *b* or *f*, *k*
and *g* or *x*, *s* and *z*, *f* and *v* etc. overlap. We are not likely to come
across an overlapping of e.g. *p* and *k*, unless they have first in
certain positions each been reduced to sounds that have more in
common from the point of view of articulation than *p* and *k* have;

¹⁾ Louise Kaiser has proved to what great extent the difference in maximum
rate of the various speech organs influences sound changes. (Quoted by Stetson in
The relation of the phoneme and the syllable, Proc. II Int. Congr. of Phonetic Sciences,
1935, p. 249).

sounds whose 'zones' of articulation are nearer to each other. We find an instance of this in English, where plosives are nowadays often pronounced with a closure of the glottis. This is the first step to an 'approach' between *p* and *k*. The next is that in pronouncing these plosives in some positions some speakers content themselves with a mere closure of the glottis, not closing the supraglottal passages by the lips for *p* or by the back of the tongue for *k*. Thus *p* and *k* have come to overlap in these positions: With some speakers 'hackney' and 'happening' only differ by their last sounds and by the pronunciation of the *n*: [hæʔnɪ], [hæʔɲɪŋ]; 'I stop them' and 'I stock them' may come to sound alike: [ai stɔʔ ðəm].

Glossematicians would probably say: but that is diachronic linguistics, that does not concern the *system*. But if we want to set up linguistics as "a systematic, exact, and generalizing science in the theory of which all events (possible combinations of elements) are foreseen and the conditions for their realization established" (OSG p. 10), we cannot do without data such as these: that certain sets of phonemes, on account of their *articulation*, are more likely to overlap than others. We cannot attain Hjelmslev's ideal of foreseeing all possibilities when discarding the substance of linguistic expression, sound, from our studies. Hjelmslev admits that "l'opposition ... considérée en elle-même et abstraction faite de sa suppression possible, reste par définition un fait de substance". The above will have made it clear that there is no need for the addition "abstraction faite de sa suppression possible", for "l'opposition reste par définition un fait de substance". But it is a "fait de système" as well: it can only be the latter because it is the former ¹⁾.

That Hjelmslev, would never agree with the "phonetic" conception of oppositions is clear. He holds that the facts concerning speechsounds are only accidental facts which result from

¹⁾ Cf. also A. W. de Groot:

"La conscience d'un rapport intime entre deux phonèmes se rencontre en général dans l'opposition directe, *même quand la faculté d'être neutralisée manque*" (in a direct opposition only one of the peripheral relevant features differs, the others being the same, in *p-b*, e.g., sonority). A. W. de Groot, *Neutralisation d'oppositions*, Neophilologus, XXV, 1940, p. 19.

It is clear that the recent investigations by Mol-Uhlenbeck may give an entirely new turn to the problem. Cf. H. Mol and E. M. Uhlenbeck, *The Analysis of the Phenomenon in Distinctive Features and the Process of Hearing*, Lingua IV, 2, 1954, p. 167-194.

the physical peculiarity of humans to express themselves with the aid of their mouths: "The fact that articulated sound is the most common means of expression, is not a consequence of any peculiarity inherent in the system, but is due to the anatomico-physiological constitution of man" ¹⁾. But — is it not this very language of human beings that we have made the object of our studies? And might it not be that this statement of Hjelmslev's could be reversed: that "any peculiarity inherent in the system" is a consequence of "the fact that articulated sound is the most common means of expression" ²⁾?

¹⁾ L. Hjelmslev and H. J. Uldall, *Synopsis of an Outline of Phonematics*, 1936, p. 3.

²⁾ Cf. Hintze, *Form-Substanz*, quoted on p. 106 of the present, and p. 224 below, the remark made by Martinet concerning the syllable and the vowel-consonant dichotomy.

CHAPTER VI

SOUND AND OTHER SUBSTANCES OF EXPRESSION

1. *Sound on a level with writing and other substances of expression?*

We know already, and the preceding reminds us of it anew, that to Hjelmslev it is not only a matter of indifference *which sounds* manifest a linguistic system but also by *which substance* in general it is expressed: "Thus the system is independent of the specific substance in which it is expressed; a given system may be equally well expressed in any one of several substances, e.g. in writing as well as in sounds¹⁾. The choice of substance for expression is purely conventional and depends on the usage, not on the norm or system. (See p. 108 of the present, BS). The fact that articulated sound is the most common means of expression, is not a consequence of any particularity inherent in the system, but is due to the anatomic-physiological constitution of man"²⁾. We find the same in the example of the net, quoted on p. 94 and resumed in OSG p. 52. A more detailed exposition of this view is given in OSG p. 92: "Further, it is possible to replace the usual sound-mimicry-gesture substance with any other that offers itself

¹⁾ On this point Hjelmslev does not follow the linguist he mentions repeatedly as one of the forerunners of glossematic theory, viz. H. G. Wiwel, who in his *Synspunkter for Dansk Sproglaere* (1901) decidedly puts speech before any other "substance of expression", in casu before writing: "Det bör fremhaves, at talen er det egentlige sprog, skriften kun dens ufuldkommene billede" ("It should be stressed, that speech is the real language, writing only its imperfect image"). And for the practical purpose of teaching Wiwel comes into conflict with glossematic description on still another point, when he wants to have some elementary phonetics taught at school, "saledes at ingen kan bilde sig ind, at forskellen mellem *mand* og *man* består i, at det første ord efter *n* har den lyd, som begynder ordet *dag*, ..." ("so that nobody can think that the difference between *mand* (pron. mæn²⁾) and *man* (pron. mæn, BS) consists in the first word having after *n* the sound which is heard at the beginning of *dag*" (Op. cit. p. 353, 354 resp.).

Cf. also E Nida, *Morphology*; p. 1: "Descriptive analysis must be based upon what people say. ... it means that the written form of the language is entirely secondary (in fact, quite irrelevant) so far as the descriptive linguist is concerned".

²⁾ L. Hjelmslev and H. J. Uldall, *Synopsis*, p. 3.

as appropriate under changed external circumstances. Thus the same linguistic form may also be manifested in writing, as happens with a phonetic or phonemic notation and with the so-called phonetic orthographies, as for example the Finnish. Here is a graphic 'substance' which is addressed exclusively to the eye and which need not be transposed into a phonetic 'substance' in order to be grasped or understood. And this graphic 'substance' can, precisely from the point of view of the substance, be of quite various sorts". The same view is expressed over and over again: "There is no necessary connection between sounds and language"¹⁾. "Puisque la langue est une forme et non une substance (F. de Saussure) les glossèmes sont par définition indépendents de la substance, immatérielle (sémantique, psychologique et logique) et matérielle (phonique, graphique etc.)"²⁾. "En s'appuyant sur le principe de l'arbitraire du signe, il (Hjelmslev, BS.) soutient que la forme linguistique est indépendante de la substance dans laquelle elle se manifeste, et que la forme ne peut être reconnue et définie qu'en faisant abstraction de la substance et en se plaçant sur le terrain de la fonction"³⁾.

The instances could be multiplied from other works of Hjelmslev and other glossematians. H. J. Uldall: "... for it is only through the concept of a difference between form and substance that we can explain the possibility of speech and writing existing at the same time as expressions of one and the same language. If either of these substances, the stream of air or the stream of ink, were an integral part of the language itself, it would not be possible to go from one to the other without changing the language". "... ink may be substituted for air without any change in the language ... When we write a phonetic or a phonemic transcription we substitute ink for air, but the form remains the same, because the functions of each component form have not been changed"⁴⁾. "The substance of ink has not received the same attention on the part of linguists that they have so lavishly bestowed on the sub-

¹⁾ L. Hjelmslev, *On the Principles of Phonematics*, 1935, Proceedings of the Second International Congress of Phonetic Sciences, p. 51.

²⁾ L. Hjelmslev and H. J. Uldall, *Etudes de linguistique structurale organisées au sein du Cercle Linguistique de Copenhague*, Bulletin du C. L. de Copenhague II '35 p. 13 ff.

³⁾ L. Hjelmslev, *Les rapports entre forme et substance linguistiques*. Bulletin du Cercle Linguistique de Copenhague IV, 1937-38.

⁴⁾ H. J. Uldall, *Speech and Writing*; Acta Linguistica IV, 1944, p. 11.

stance of air. We can see at a glance, however, that it behaves in much the same way ..." (p. 12).

2. *Two objections supported*

Hjelmslev mentions two opinions opposing his in this matter (OSG p. 92):

a. The "naturalness" of the sound substance over against the "artificiality" of the other substances.

b. The fact "that a different "substance" is accompanied in many instances by a changed linguistic form; thus not all orthographies are "phonetic" but would, on analysis, lead us to set up a different taxeme inventory and perhaps partly different categories from those of the spoken language". Let us have a closer look at both these objections.

a. *The "naturalness" of the sound substance over against the "artificiality" of the other substances.* Hjelmslev refutes this remark by stating that even if a manifestation is "derived" in respect of another this does not "alter the fact that it *is* a manifestation of the given linguistic form" (OSG p. 93). "Moreover" — he goes on — "it is not always certain what is derived and what not; we must not forget that the discovery of alphabetic writing is hidden in pre-history, so that the assertion that it rests on a phonetic analysis is only one of the possible diachronic hypotheses; it may also have rested on a formal analysis of linguistic structure". And in a note: "Bertrand Russell quite rightly calls attention to the fact that we have no means of deciding whether writing or speech is the older form of human expression". And then the last argument: "... in any case, ... diachronic considerations are irrelevant for synchronic description" (OSG p. 93).

Several facts might be pointed out in opposition to these three remarks and consequently in support of the objection mentioned.

Firstly, a "derived" manifestation is indeed a manifestation of the given linguistic form. But it is an indirect manifestation, which as such can never "manifest" that form as clearly as it is in its original manifestation (See the quotations from de Saussure on p. 11 above).

Secondly, with reference to the difficulty raised by Russell: nobody will deny that a certain person's knowledge of his

language as it is spoken may at a certain time "develop into" a knowledge of his language as it is written, and that the process is never reversed¹⁾. And thus we may safely conclude, I believe, that what we see about us every day reflects what happened when writing was first invented. "... hardly anybody doubts that mankind has been able to speak before it could write, and all people can speak but only a few can write. Sound substance is something that is always connected with a language-system in every-day language, writing is something that *can* sometimes be connected with it. And the development of writing in the various languages can partly be traced back to its origin, sometimes it is the work of one single person, whereas the origin of speech is hidden in the mists of prehistoric times. Therefore it is justified to call writing derived and artificial compared to sound"²⁾. Miss Fischer-Jørgensen admits that alphabetic writing as a rule is not based on a sound-analysis but represents the expression-units of a language, in the sense that different letters have been formed for the units which should be distinguished from each other. "But it surely was the expression system formerly manifested in sounds which was analyzed, not an unmanifested expression system". (Ibid.). An exception may have been the oldest "writing" which took the shape of pictures. But this kind of writing could represent a language only partly. Even with the oldest Egyptian "ideographic" writing it is doubtful if no sounds were thought of, for at a rather early stage the pictorial writing becomes phonetic: words for 'abstract' things were represented by symbols used for words for 'concrete' things that had the same sounds, as e.g. English 'son' would be represented by a 'sun'³⁾.

"Even Chinese, the most logographic of all the writings, is not a pure logographic system because from the earliest times it has used word signs functioning as syllabic signs (e.g. to render foreign words or names)"⁴⁾ "... a primitive logographic writing can develop into a full system *only if it succeeds in attaching to*

¹⁾ Except, of course, in abnormal cases: with abnormal persons (e.g. deaf-mutes) or with special language situations (e.g. when a person learns a language other than his own).

²⁾ E. Fischer-Jørgensen in *Nordisk Tidsskrift for Tale og Stemme* VII, 1943, p. 91. Free translation mine.

³⁾ See De Buck, *Egyptische Grammatika* p. 1-4; I. J. Gelb, *A Study of Writing* 1952, p. 192, 193, 194.

⁴⁾ I. J. Gelb, *A Study of Writing*, London 1952, p. 193.

a sign a *phonetic value* independent of the meaning which this sign has as a word. This is *phonetization, the most important single step in the history of writing* (p. 193, 194, italics mine). ... With the introduction of phonetization and its subsequent systematization complete systems of writing developed which made possible the expression of any linguistic form by means of symbols with conventional syllabic values" (p. 194).

Of course we can use other substances of expression besides "a stream of air" and "a stream of ink"; Uldall mentions Chesterton's "almost glossematic" story of Professor Chadd who tried to speak by dancing¹⁾. But any other substance will have to *represent* by its units either the speechsounds or the spelling of the language it is to "express"²⁾. If it does not, it will only be able to represent a limited number of "content units", not all, because then it would demand too much of human memory. In China it is only a very few learned people who can read and write.

Miss Fischer-Jørgensen ends her defense of the priority of speech to writing with the concession that it is of course true that writing can actually be a direct manifestation of the linguistic form. Also before the passage just quoted we read that it is "naturligvis ubestridelig rigtig" that the same form can be manifested in different substances; but "another question is that people seldom do it ... and Hjelmslev himself remarks that in reality it is rarely quite the same form. In Danish writing e.g. we find *h* before *v*, whereas the corresponding sound can only occur before a vowel. Only purely phonetic writing is formed exactly alike"³⁾. It will appear that even the last is not quite true (see p. 118). Similar instances as the one mentioned by Miss Fischer-Jørgensen from Danish can be given from many languages, in Dutch, for instance, a *d* is still written at the end of words, but pronounced as *t* in open juncture.

b. Herewith we have come to the second objection quoted by Hjelmslev: the fact that "*a different 'substance' is accompanied in*

¹⁾ G. K. Chesterton, *The noticeable Conduct of Professor Chadd* (in "The Club of Queer Trades", 1905).

²⁾ Professor Chadd's system must have done, seeing his friend picked it up in three-quarters of an hour!

³⁾ *Review OSG* p. 90, 91, translation mine.

many instances by a changed linguistic form" (OSG p. 92, quoted in full on p. 111 of the present).

To refute this remark Hjelmslev states that it is "irrelevant because it does not alter the fact that a linguistic form is manifested in the given substance" (OSG p. 93).

But it is not this fact which is denied by his 'opposition'. They do not deny that writing, too, expresses a linguistic form; they only deny that the linguistic form expressed by writing should be the same as that expressed by sound: "a different substance is accompanied in many instances by a *changed* linguistic form" (italics mine). In fact it is the same as what Hjelmslev observed according to Miss Fischer-Jørgensen (see above). In this place in OSG, too, he accepts the fact himself as quite natural: "The observation is interesting, however, in showing that *different systems of expression can correspond to one and the same system of content*" (OSG p. 93)¹). He concludes that the linguist's task is therefore also to calculate what expression systems in general are possible as expression for a given content system; but that "it is an experimentally demonstrable fact that any linguistic expression system may be manifested in widely different expression substances"²).

As long as we remember that the only true expression substance of language is *sound* there is no objection to the last remark, for "a language can suffer a change of a purely phonetic nature without having the expression system of the linguistic schema affected ..." (OSG p. 93). But this possibility of different expression "substances" (sounds) for one expression system has nothing to do with the assumed possibility of different expression systems for one and the same language. The acceptance of this conception of language would have far-reaching consequences. In the first place it would mean that Hjelmslev would have to change what he says of the *sign* and of language: "Any sign, any

¹) Garvin (*Review OSG* pp. 86, 92, 93), seems to have overlooked this admission by Hjelmslev.

²) Hintze's distinction between external and internal relations proves valid in demonstrating that "... was hier von Hjelmslev als möglich angenommen wurde, ist im Grunde genommen gar keine Transponierung im eigentlichen Sinne (unter Erhaltung der "Form" in allen ihren Aspekten), sondern eine blosse Umsetzung, eine Abbildung, die verständlich und brauchbar nur ist durch die immer mögliche und immer notwendige Rückumsetzung in die einzige adäquate Substanz der Sprache: die phonische Substanz" (*Form-Substanz* p. 98).

system of signs, ... any language, contains in itself an expression-form and a content-form" (OSG p. 54), into: Any sign, ... any language, contains in itself *many* expression-forms and a content-form.

It would also mean, as Bazell points out, that in that case it is no longer a matter of usage only which plane is called content and which expression ¹⁾).

In the third place, it would mean that a language was only determined by its *content system*, not by its *expression systems*.

It seems at times as if glossematians actually hold this view. In fact it is exactly what Uldall says: "If we keep the units of content constant, we shall have *the same language whatever system is used to make up the corresponding units of expression*" ²⁾). Conclusion: "a system of *any internal structure* will do, provided that a *sufficient number of units* can be made up from it to express the units of content". Again: "Flagwagging, dancing ³⁾), they will all be adequate if they fulfil the single condition of providing a *sufficient number of units* to express the units of content. The system of speech and the system of writing are thus only two realizations of an *infinite* number of possible systems, of which no one can be said to be more fundamental than any other" (p. 16, italics mine).

But ... the greater part of the 'units of content' of one language, English, e.g., can be rendered very well by the units of expression of another language, say Danish. How could we distinguish the two languages? Do we have to find out if the numbers

¹⁾ Review OSG p. 91-92: "... the terms *expression* and *content*", we are elsewhere informed, (p. 55 OSG) "are entirely arbitrary. On the basis of their functional definition there is no justification for calling one of these planes expression and the other content, rather than vice-versa". In other words it is a mere concession to ordinary usage that throughout the book the plane which is manifested in sounds or writing is called expression; and from the glossematic standpoint this is only logical. But it is no longer a matter of mere usage if two systems within the same language are classed together under one term, namely expression: this does or should imply that these systems have the same functional relation to the third plane. But in the case under consideration we should have to deal with graphic and phonic systems which were asymmetrical to one another in the same way as both were asymmetrical to the content-system. In any scheme of three planes we should expect to find two whose relations were less asymmetric than the relations of either to the third; but that these two planes should be those of expression, in the more popular sense, is from any standpoint unnecessary and from the strictly formal standpoint even irrelevant" (p. 91-92). See also Ch. VIII, 5 of the present.

²⁾ H. J. Uldall, *Speech and Writing*, p. 15, italics mine.

³⁾ See p. 113, note 1.

of the units of content ¹⁾ are all alike or not? Do we have to find out if the units of content themselves are alike? Would we have to wait till we had come across an 'untranslatable' word?

The term 'ideophonic' is from Uldall: "The *maximal* system is the truly ideographic or ideophonic one, a system providing one element for each unit of content instead of a unit made up of elements which can be used over and over again in other combinations. The *minimal* system is the smallest one from which a sufficient number of units can be made up" (*Speech and Writing* p. 16). But the term 'ideophonic' is a superfluous one: among all the hitherto known languages there is none that is 'ideophonic', none that has a different single sound-element for each unit of content. All languages, no matter how 'ideographic' their writing may be, use phonic units "made up of *elements which can be used over and over again in other combinations*". And we saw that also an 'ideographic' writing must by definition be incomplete and imperfect, and must sometimes have recourse to 'phonetization' ²⁾. On this point OSG voices a view directly opposed to the above: "Thus, a language is so ordered that with the help of a handful of figurae ³⁾ and through ever new arrangements of them a legion of signs can be constructed. *If a language were not so ordered it would be a tool unusable for its purpose.* We thus have every reason to suppose that *in this feature* — the construction of the sign from a restricted number of figurae — *we have found an essential basic feature in the structure of any language*" (OSG p. 43, italics mine).

This is a fact which cannot be put aside. Is it not remarkable that not all languages can have a "stream of ink" as substance of expression but that they all have a "stream of air" as such a substance? And is it not remarkable that that system of writing is the easiest to use which gives one symbol for every unit of the phonic substance? One would ask glossematicians: Why should it be like this? Can it possibly be because writing is derived, secondary, whereas the phonic substance is the natural means of expression for language, that is, linked up with its origin?

But there remains Uldall's question: "How can two mutually

¹⁾ See the quotation just given.

²⁾ See p. 112, 113 above.

³⁾ See the next chapter.

incongruent systems be used side by side to express the same language''? (*Speech and Writing* p. 14). We saw that his answer and Hjelmslev's answer too is that different expression systems can correspond to one and the same system of content.

I would give a different answer and find the key to it in Uldalls paper: "... although it is true that in the history of mankind, as far as we know it, speech preceded writing, it is not true that the present sound pattern preceded the present orthography" (p. 14). To which I would add: on the contrary. In most modern languages the orthography is ages behind the sound pattern unless they have just had a spelling reform. It renders, more or less adequately, a system of expression long past, in many cases belonging to a system of content also long past. The Dutch suffix '-lijk', for instance, still shows in its spelling its original content: 'having the shape of'. But there is no speaker of present-day Dutch who thinks of this content when using a word ending in '-lijk', nor is it any longer pronounced as it was when this content was still remembered, everybody says [lək], which would be far better represented in writing by '-luk' in Dutch.

Thus the phonic expression system of a language has to content itself with an old notation until the people speaking that language decide to have a spelling reform.

Spelling reforms are an interesting phenomenon in this connection. I wonder how glossematicians explain the fact that from time to time people deem it necessary to have spelling reforms but that they have never yet decided to have a 'sound reform'. Would not it be because writing has to keep track of phonic expression lest it should become inadequate? English spelling is an instance of a notation that is becoming more and more inadequate, and is badly in need of a reform. As it is at the moment, English schoolchildren spend years in learning to write their own language, only a few mastering it completely. An interesting point is that the mistakes people make in their spelling, in so far as they are not due to carelessness, are mostly very reasonable mistakes in that they render the actual phonic system of expression more closely, and they may therefore often be considered as indications of the 'direction' in which the spelling in question wants reforming. I do by no means deny that, conversely, orthography may influence speech — of which

English, again, offers many instances in its "spelling-pronunciations". But this is only a seeming support of Russell's statement (see p. 111 above): the orthography in question is based on what was *said* or what is supposed to have been said long ago (cf. the so-called "etymological spellings").

Writing, therefore, and any expression substance other than sound, may be said to *represent* more or less adequately *the phonic expression system* of a language — *it does not manifest the expression system direct*.

Hence my restriction on the statement that "any linguistic expression system may be manifested in widely different expression substances": this should only be taken in the sense of '*phonic substances*' (See p. 114 ff). For even if we should analyze *phonetic* script we should find that it formed a system different from the phonic system which it represents, because the "internal relations" (see p. 9 above) would be different.

"An analysis of writing without regard to sound has not yet been undertaken", says Hjelmslev (OSG p. 93 note 3). If such a thing was undertaken it would appear that we not only had to do with a *different system of 'phonemes'* — to keep that term for convenience' sake for the elements of the two systems (sound and writing); — which Hjelmslev admits too (see p. 114), but also with a *system of different phonemes*. Hjelmslev would say this was of no importance as only the *relations* between the elements count in their definition, that is to say: their external relations. But we have seen that the elements cannot be defined without having recourse to their substance as well. In writing it is the *shape* of the elements, therefore, which we should have to take into account.

Now there may be observed in printed writing, for instance, certain 'correlative' sets of 'phonemes' like the ones we have in the phonic system. Only — they do not embrace the same units. In the phonic system we have to judge by our ears and find e.g. the set $p : b = t : d = k : g$. In print we have to judge by our eyes and find e.g. a set like: $p : b = q : d$. Or a set like: $n : m = v : w$. The system of capitals shows other 'oppositions': e.g. $F : E = P : B$. In phonetic script there are still other 'oppositions' to be found, e.g. $e : \text{ə} = p : d = b : q$.

This is of course what Hjelmslev means when he says: "L'oppo-

sition ... considérée en elle-même et abstraction faite de sa suppression possible, reste par définition *un fait de substance*"¹⁾. It has been shown that this paper brought forward the great importance of 'overlapping', of the 'suppression' of oppositions. "La suppression d'une différence est due à un conditionnement fonctionnel et est en elle-même d'ordre purement formel, puisqu'elle consiste en *la fusion de deux formes sans égard à la substance spécifique dans laquelle elles se manifestent*". (p. 53). In opposition to this I pointed out above that a suppression never takes place "sans égard à la substance", but that it is the substance of the forms also which makes their suppression possible (see pp. 106 ff.). The alleged equality of the phonic and the written substance of expression serves beautifully to illustrate this still further. For also in writing we find the phenomenon of 'overlapping', of 'superposition' of two 'phonemes', of the 'suppression' of the 'opposition' between them. But just as with the ordinary 'oppositions' mentioned above, these phenomena concern different units in writing than they do in the phonic system.

There would for instance in hand-written Dutch appear to be a frequent overlapping between *u* and *n*, *h* and *k*, *o* and *a*, *e* and *i*. Which would mean that the opposition between these sets of 'phonemes' was, also in Hjelmslev's opinion, a 'functional' opposition: "Le fait primaire est le superposition de deux formes différentes; la superposition se manifeste en une fusion; elle a pour effet de provoquer une polarité²⁾ entre les termes qui se superposent l'un à l'autre"³⁾. As such superpositions are said to be of formal importance and concern the system, the only conclusion to be drawn from the above would be that there are as many systems of expression as there are individual systems of writing, individual handwritings. And more — for now we have only considered speech and writing yet. How many 'systems of expression' would one language have if all possibilities of all possible substances of expression were examined?

It would be better, therefore, not to speak of other substances than speech as "substances of expression", it would be better to

¹⁾ *Note sur les oppositions supprimables*, TCLP VIII, '39, p. 53.

²⁾ See p. 105.

³⁾ *Note sur les oppositions supprimables* p. 57.

call them, for instance, "substances of *speech-representation*" ¹⁾. For the synchronic study of language systems they are of no importance, their interest lying more in the field of diachronic linguistics ²⁾.

It goes without saying that I do not pretend to have solved the problem of the relation *speech-writing* with this. The only aim of the preceding pages is an immanent criticism of glossematic views on the subject.

3. *The syllable*

Whereas the *word* and the *phoneme* receive their due share of glossematic attention, OSG says nothing about the *syllable*. All the same the syllable figures repeatedly in enumerations of the various stages of the analysis: "The text is a chain, and all the parts (e.g. clauses, words, syllables, and so on) are likewise chains ..." (OSG p. 28). "Syllables and phonemes are not sign-expressions, but only parts or derivates of sign-expressions" (OSG p. 41). "... partition of sentences into clauses, and clauses into words, partition of groups of syllables into syllables, of these into parts of syllables, and of these into smaller figurae" (OSG p. 64). The most that is said in OSG about the syllable is on p. 26: "A syllable may be divided on the same principle: under certain structural conditions ... it is possible to distinguish between a central part of the syllable (the vowel, or sonant) and a marginal part (the consonant, or non-sonant), by virtue of the fact that a marginal part presupposes textual coexistence of a central part but not vice versa; thus, here again there is selection. This principle is, indeed, the basis of a definition of vowel and consonant long forgotten by the pundits but still, I believe, maintained in elementary schools and undoubtedly inherited from antiquity".

It is not said by what division of the text we arrive at the syllables. This is remarkable because in previous articles the syllable has repeatedly been the centre of interest ³⁾. In these

¹⁾ In spite of the quotation of de Saussure's *Cours* in this connection (OSG p. 93, note 3), see my quotations from the same author in the Introduction to the present.

²⁾ See the example on p. 117.

³⁾ I. a.: L. Hjelmslev, *On the Principles of Phonematics*, Proceedings II Int. Congr. of Phonetic Sc. London 1935 p. 49-54. Id., *Accent, Intonation, Quantité*, Studi Baltici VI, 1936-37 p. 1-57. Id., *La syllabation en slave*, Mélanges ... Aleksander Belić, Beograd 1937, p. 315-324. Id., *The Syllable as a Structural Unit*, Proceedings III Int. Congr. Phonetic Sc., Ghent 1938, p. 266-272.

papers the syllable is defined in two different ways: *with* the aid of sound, we might call it, and *without*. Or rather: with the *mention* of sound and without: also in the 'sound-less' definition it would seem as if sound has crept in by a backdoor. Such a sound-less definition of the syllable is given in 1937 and 1938, when Hjelmslev writes:

"A syllable is a chain of expression including one and only one accent" ¹⁾. But shortly later in the same article 'accent' is defined by means of the syllable (called 'accent theme'): "it (accent) is bound to a chain of other units which are not accents. ... In [dɔktə], ... accent no. 1 (strong stress) is bound to the *chain* [dɔk], accent no. 2 to the *chain* [tə]. These chains, which do not themselves consist of accents, but of which each accent is a function, may be termed *accent themes*" (p. 268) ²⁾. It is interesting to note that what is called 'accent' here seems to be what Jones calls a 'peak of prominence', which is a peak of *sonority*. The method in which the two chains [dɔk] and [tə] have been arrived at is not stated, it seems that Hjelmslev too, tacitly assumes that we *hear* that they are there. At any rate the problem is passed by in this paper.

It is further said that accents may be manifested by different degrees of stress, pitch, by diacritic signs, etc.: the *manifestation* is *irrelevant* for its definition (p. 267). Hjelmslev goes so far as to give as two *opposite* examples Vedic Sanskrit, where the *writing* shows up accents, and where consequently the syllable is recognizable "directly by a study of the writing without any knowledge of the pronunciation"; and on the other hand modern German, where the *sound* system "comprises a phonetic manifestation of accents", and where consequently the syllable is recognizable "directly by a study of the pronunciation without any knowledge of the writing" (p. 266). It is not mentioned that in the case of languages like modern German and numerous other languages, the syllable would never be recognizable in the writing if we did not know what *sounds* the various symbols of writing

¹⁾ *The Syllable as a Structural unit*. Proceedings III Intern. Congr. Phon. Sc., Ghent 1938, p. 266.

²⁾ See for a short description of the development of Hjemlev's concept of 'syllable': Togeby, *Structure immanente de la langue française*, p. 48.

Togeby has noticed the circle in the definitions of the syllable and the accent too: see p. 75.

represented. And that a writing never shows accents unless they occur in the *pronunciation*, but that the reverse occurs innumerable times, as in modern German ¹⁾.

By the commutation test, Hjelmslev goes on in the same paper, we find out if a language has accents or not, viz. when the replacing of one of the above elements (entails) a change of meaning. Yet, in the English example 'doctor', there is no change of meaning, but there the accent is compared to a grammatical unit: just as a noun can have two cases, the use of which depends on the connexion, "so an accent theme like [dɒk] can have two accents, of which one must be chosen in one connexion and the other in another connexion ²⁾. The accent theme has accent declension". After the example of a shift of accent without a shift of meaning, Hjelmslev gives as an example of a language *with* accents German, c.f. 'hintergéhen' — 'hintergehen'. If I am not mistaken, the word 'accent' has undergone two changes of meaning now: from 'peak of sonority' it has come to mean: 'stress', and from 'stress' it appears in the end to mean only functional stress, stress as a distinctive feature. Consequently:

In French, stress degrees are not "commutable", not capable of entailing difference in meaning. So French has *no accents*. And from the definition it follows that a language without accents has *no syllables* (p. 270). At most it has "*pseudo-syllables*". The way to find the pseudo-syllable is, first to find the vowels and the consonants — which in that case are of course only 'pseudo-vowels' and 'pseudo-consonants' according to the glossematic view: in most of these languages the vowel and the consonant cannot be determined either, only if the language has words consisting of one minimum unit, like French 'à' and 'ou'. Then the other vowels are those units that are governed by the same consonants as [a] and [u]. "When the difference between vowels and consonants has been established in this way, a unit which includes one and only one vowel can be defined as a *pseudo-syllable*". But if such a language has no words of one

¹⁾ Cf. Bazell: "... written language may be regarded as secondary for purely synchronic reasons: for instance the fact that certain letter-combinations are not found in a given language may be immediately comprehensible if we know the acoustic features they symbolise, whereas a study of graphic features would throw no light on the possibilities of phoneme-combination" (*Review OSG* p. 91).

²⁾ Cf. "thě dóctör" — "döctör Smith".

minimum unit it is impossible even to distinguish between vowel and consonant, at most we can distinguish between two sorts of units. In such languages we cannot even establish 'pseudo-syllables' (p. 270).

In 1937, however, Hjelmslev had written the following on the languages "without accents":

"Dans les langues ignorant les accents la syllabe est à définir comme une chaîne comportant un seul élément central" ¹). ('Central elements' are those which are "susceptibles à constituer à eux seuls un énoncé", and those which, from a functional point of view, behave in the same way without actually constituting an utterance in themselves). Here, too, however, such a syllable is qualified as a "pseudo-syllable" and "ne réclame pas le même droit d'unité linguistique fondamentale que la syllabe définie par l'accent". Here, too, we still come across utterances such as: "Sans vouloir contester la possibilité qu'il y aurait d'arriver à *une véritable définition phonétique* ou phonologique de la syllabe ..." (p. 316, italics mine).

Although in 1936-37 Hjelmslev defines the syllable as "un chaînon caractérisé par un accent", he adds: "La définition de la syllabe que nous avons proposée dans les Proceedings 2nd Congr. Phon. Sc. 52, conserve sa valeur heuristique et est d'un certain point de vue *plus générale* parce 'qu'elle s'applique aussi aux langues ignorant les accents'" ²).

The article Hjelmslev refers to here is from 1935, and dates from the time when 'glossematics' was still 'phonematics'. The way indicated there to find the vowels and the consonants is vague — for that purpose I believe we do need the *syllable*. The phonematic inventory of a language is found by the commutation test. Thus we find *pre-phonemes*. They may by further operations be reduced to *phonemes*. E.g. Engl. 'kick' [khikh], 'tick' [thikh], 'kicks' [khikhʰs]. The method of commutation makes us recognize only the prephonemes *p*, *t*, *k*, *h*. The function of the prephonemes is studied by establishing a list of all prephoneme combinations occurring in the language. We find e.g. in English: *bə*, *ba*, *bi*, *ən*, *əs*, *əz*, *əl* etc. "This done, we find that these series are composed of two different types of

¹) Hjelmslev, *La syllabation en slave*, Mélanges linguistiques et philologiques offerts à M. Aleksander Belić, Beograd 1937, p. 319.

²) L. Hjelmslev, *Accent, Intonation, Quantité*. Studi Baltici VI, Rome 1936-1937, p. 19.

prephonemes in such a way that a prephoneme of one type may be combined with a prephoneme of the other type, whereas two prephonemes belonging to the same type can never be combined". The two types are then: *central prephonemes, which have the faculty of forming a notional unit, or a word, by themselves, e.g. Engl. ā, ə, ī, and marginal prephonemes, which can never make up a word by themselves, e.g. Engl. b, n, s etc.* "Now a central prephoneme can only be recognized as a phonematic unit if it occurs in the language without entering into central groups, and a marginal prephoneme can only be recognized as a phonematic unit if it occurs in the language without entering into marginal groups". (Meant is, in my opinion: if it can occur *alone* as a marginal unit). "This condition is necessary because otherwise it would be impossible to distinguish between single phonemes and groups of phonemes. The condition is fulfilled for the English *h*, which is a marginal prephoneme occurring outside of marginal groups, e.g. in [hɒp], but not for the prephonemes *p, t, k*, which never occur outside of marginal groups such as *ph, th, kh*". So "*h* is in English a phonematic unit, but *p, t, k*, are not; the prephoneme groups *ph, th, kh* consequently are to be considered as single phonemes in English" ¹). Then vowels are defined as the central prephonemes found by the test of the prephonemes to be phonemes: "A vowel is an independent or combined phoneme" ²).

When reading these and similar glossematic discussions we should be careful not to lose sight of some essential *facts* about the syllable. Apart from the question how the syllable could be recognized without reference to sound-substance (why should [ælp], 'Alp', be one syllable and [æpl] 'apple', two?), the question may be asked why there should be syllables at all. And why there should be certain parts of syllables which are always marginal parts in the same language, and others which in the same language are always central parts. Might not it have something to do with the interesting facts Hjelmslev states concerning the delimitation of syllables?: "in any language" — he writes in 1935 — "the initial and final clusters surrounding the combined phoneme (i.e. a vowel or semivowel in vocalic function, BS) and belonging to the same syllable may be composed in any way in

¹) The description does not agree with the facts of English pronunciation, in which *p, t* and *k* do occur outside of "marginal groups" as *ph, th, kh*: they never have the strong aspiration in final position or medially before unstressed syllables.

²) L. Hjelmslev, *On the Principles of Phonematics*. Proc. II Intern. Congr. of Phon. Sc., London, 1935, p. 52.

which an initial and a final cluster can be composed in a notional unit consisting of one syllable, but not in any other way. Thus the limits of a phonematic syllable are submitted to rules . . .¹⁾ Or, again: "Im allgemeinen können am Anfang und am Ende einer Silbe nur solche Konsonantengruppen auftreten, welche auch am Anfang und am Ende eines Wortes möglich sind"²⁾.

I do not mean to say that all difficulties will be solved the moment we try to define the syllable, vowel and consonant from *spoken* language³⁾, but no doubt this method will bring us farthest. There is indeed some truth in the simple statement that syllables are the soundgroups into which our ear naturally divides the sound continuum⁴⁾.

¹⁾ Hjelmslev, *On the Principles of Phonematics*, 1935, p. 52.

Miss Fischer-Jørgensen mentions Finnish as a language in which there is a discrepancy between the rules for the two positions. (*On the Definition of Phoneme Categories*, Acta Linguistica VII, 1952, p. 18). Hjelmslev connects this with the fact that Finnish has vowel-harmony, so that there is a more intimate connection between the syllables within a word than in most other languages (Op. cit. p. 18, note 2).

Connected with this is an objection made by the same author against Hjelmslev's "empirical law" that clusters of three consonants can always be dissolved into two clusters of two consonants (1 + 2 + 3 dissolved into 1 + 2 and 2 + 3) already found in the language: Russian and Kutenai offer various exceptions.

²⁾ *Neue Wege der Experimentalphonetik*, 1938, p. 156.

³⁾ The place of the partition lines between syllables in the word is one difficulty that has not yet been solved. But would it have been solved with Hjelmslev's definition of the syllable? The *s* in Germanic languages is another problem.

⁴⁾ The difference between phonemes being a *natural* acoustic datum, while between the two sets of phonemes that we call 'vowels' and 'consonants' there is again a "natural maximal acoustic contrast". Thus "the sequence of vowels and consonants necessarily results in the *syllable*". (Reichling, *De Taal, haar Wetten en haar Wezen*, ENSIE II, 1947, p. 40, translation and italics mine).

Definitions of the syllable are given, among others, by D. Jones, *An Outline of English Phonetics*, 1948, p. 54.

His definition of the syllable corresponds to Pike's phonetic syllable which contains, according to him "a single chest pulse and a single peak of sonority or prominence". (*Phonemics*, p. 61). See, however, his definitions in *Phonetics*, p. 108, 116, 117, (1943). Pike's definition in *Phonemics* is taken over by Miss Fischer-Jørgensen, *On the Definition of Phoneme Categories*, Acta Linguistica VII, p. 16 (1952).

The conception of the syllable as constituted by a "chest pulse" or "breath pulse" is from Stetson, to cite only one of his last publications on the subject:

"The basis of the syllable proves to be the syllable pulse; every syllable is a breath pulse produced by the intercostal muscles of the chest". (R.H. Stetson, *Segmentation*. Lingua II, 1, 1949, p. 49). See, however, E. A. Nida: Review of Stetson, *Bases of Phonology*, Word, III, 1947, p. 134, for difficulties with this definition when normal (not slow) speech is concerned. Cf. further: Stetson, *Motor Phonetics*, 1951.

Stetson's viewpoint has been taken over by De Groot: "Voilà pourquoi nous considérons l'unité balistique comme la seule qualité de la syllabe dont on a pu démontrer jusqu'ici qu'elle est essentielle". (*Voyelle, Consonne et Syllabe*, Archives Néerlandaises de Phonétique Expérimentale, XVII, 1941, p. 39). By this conception of the syllable De Groot believes the difficulty of *s* in German, Dutch etc. is overcome,

This division of the sound-continuum into syllables, however, is an operation apart: the glossematic method of "partitioning" cannot take it in its stride. OSG gives the impression as if this is what happens, by its repeated insistence on a division of the text into ever smaller parts, which would mean that the linguist after the division into words, would divide these into syllables and the syllables into phonemes: "When the parts of syllables are further partitioned, we reach the entities which are conventionally called phonemes" (OSG p. 39). In practice, however, it appears that also glossematics finds the phonemes from the word direct (commutation test), and not via the syllable.

In the course of the division-procedure, inventories shall be made up of all the elements in one class. Now these inventories are said to become smaller and smaller the farther the division progresses: The inventories of the largest units will be vast, in fact they will be unlimited: "it will be possible to register an unrestricted number of sentences, clauses, and words" (OSG p. 38, 39). The reader will ask how it will be possible to "register an unrestricted number" of anything and when such a registration will be *exhausted*. When do we have the inventory complete?

The question is left open. There is just the statement that "in each single partition we shall be able to make an inventory of the entities that have the same 'place' in the chain", and that thus we "can ... make an inventory of, e.g., all primary clauses and all secondary clauses" (OSG p. 38). It is even necessary to make such inventories to satisfy the requirement of exhaustive description (*ibid.*).

In general it may be concluded that the decrease of the number of entities we find when we pass from larger to smaller units in language is a natural consequence of the fact that, though we use a limited number of phonemes, this number is large enough to obtain a practically unlimited number of possible combinations of them. The simple mathematical operation called 'permutation' shows us that already 7 basic entities would furnish us with 5040 words.

which arises with Jones' statement that there is a new syllable whenever there is a new rise in sonority, whereas Dutch *laatst*, German *Obst* have only one syllable.

It is clear that the investigations of Mol-Uhlenbeck may give an entirely new insight into this matter (see p. 107 fn.).

Incidentally it may be noted that the great importance attached to the "place" of the entities in the chain is an outstanding feature of glossematic theory. But it is a feature which causes some difficulty because it is not defined what, exactly, one is to understand by the *place* of an element. How far does this "place" go? Is it determined solely by the units immediately preceding and following the unit to be defined, or do the units preceding and following those two count as well? And what about the units at one remove from those? For instance is *r* in [*striŋ*] considered to be in the same position as *r* in [*trik*] because it stands in both cases between *t*- and *-i*, or is it considered to be in a different position because it stands between *st*- and *-iŋ* in one case and between *t*- and *-ik* in the other? Glossematic discussions seem to take the "place in the chain" in the latter, thus in its widest sense. But it does not seem to extend beyond the syllable for phonemes.

CHAPTER VII

THE LINGUISTIC SIGN: THE SIGN IN ITSELF

1. *The Sign*

The glossematic conception of the linguistic sign and its meaning is, as was to be expected, a purely formal one. OSG gives as Hjelmslev's definition of the linguistic sign: "the unit consisting of content-form and expression-form and established by the solidarity ¹⁾ that we have called the sign function" (OSG p. 53).

As Hjelmslev calls *form*: the constant in a manifestation (definition 51) ²⁾, *constant*: a functive whose presence is a necessary condition for the presence of the functive to which it has a function (definition 12), and a *functive*: an object that has function to other objects (definition 9), it is evident that a sign for him is a particular bundle of relations, that is to say, of "*syntagmatic*" relations. For, as a constant in a *manifestation* (definition 50) a form implies *selection* (definition 38), selection being by definition (68) "*syntagmatic*", implying a *process* (definition 29). Thus we can easily understand that Hjelmslev has his doubts about language as a sign *system*, for a system is *paradigmatic* (definition 67): "Languages, then, cannot be described as pure sign systems ... The definition of a language as a sign system has shown itself, on closer analysis, to be unsatisfactory. It concerns only the external functions of a language, its relation to the non-linguistic factors that surround it, but not its proper, internal functions" (OSG p. 43/44). It will be shown in the discussion of the *figurae* (see p. 138 ff.), that Hjelmslev rightly considers the sign system as different from what was indiscriminately called "la langue" by de Saussure.

There is, however, some difficulty in Hjelmslev's notion of the "sign". On the one hand he considers "the old tradition according to which a sign is first and foremost a sign *for* something" (OSG p.

¹⁾ See p. 74.

²⁾ The definitions are given on p. 83-87 of Whitfield's translation.

44) as “linguistically untenable” (ibid.); on the other hand he is forced to admit that” a sign is a sign for something, and that this something in a certain sense lies outside the sign itself” (OSG p. 52). We should expect that this quality of pointing to something outside itself would not be a necessary part of his definition of the sign, that he would have been able to define the sign without introducing it into the definition itself. But blood is thicker than water, and we find this relation to a “content-substance” in Hjelmslev’s *formal* definition of the sign. As has just been said, *form* implying *manifestation*, *manifestation selection*, and *selection* being a *function* between a constant and a *variable*, the variable being a *functive* (that is: a necessary term of a function), the variable meant here, i.e. the substance, enters as a necessary part of the definition into the sign itself and ... the difference with the “untenable old tradition” is wiped out. It is precisely Hjelmslev’s marvellous precision in the notation of his functions that enables us to see this clearly. But it means the end of pure “formalism” even in glossematics: linguistics cannot do without substance as an essential, be it “relational”, entity in its theory.

Somebody will perhaps say: but Hjelmslev himself has foreseen this difficulty and has given a solid answer to it. He writes on p. 94 OSG: “In the general calculus there is no question of whether the individual structural types are manifested, but only whether they are manifestable and, *nota bene*, manifestable in any substance whatsoever. Substance is thus not a necessary presupposition for *linguistic form* (italics BS), but *linguistic form* (italics BS) is a necessary presupposition for substance. *Manifestation*, in other words, is a selection in which the linguistic form is the constant and the substance the variable”.

Yet, in this conclusion that “substance is *thus* not a necessary presupposition for *linguistic form*” (italics mine), Hjelmslev overlooks, I believe, some properties of his foregoing premisses, which should prevent him from concluding as he does. It goes without saying that it does not matter “whether the individual structural types are manifested, but only whether they are manifestable”, but it does matter that in the calculus there is some relation to a “substance”, otherwise there could be no calculus at all, the calculus in question not being a mathematical

or logical one as such but a "linguistic" one, working with "linguistic" entities in the traditional sense.

When Hjelmslev says "substance is thus not a necessary *presupposition* for linguistic form, but linguistic form is a necessary presupposition for substance" (italics mine), he uses the undefined term "presupposition". If he should mean that when speaking about "form" or about a form, this does not presuppose the "presence" (undefined term, OSG p. 32, cf. p. 85 of the present) of the *term* "substance" in the same context, we can readily agree, but if he should mean, what he evidently does, that "form" does not "presuppose" substance as a relational entity (thus Hjelmslev defined it as we saw above), we cannot agree at all. Form is the *constant* in a manifestation, it is true, but a "constant" does not exist on its own: whether manifested or not, it is only a "constant" with regard to another functive, in casu the *linguistic "substance"*. Hjelmslev admits that the form is the constant in a *manifestation*, but he cannot define manifestation without taking up the substance in his definition. In other words: with regard to a manifestation, substance is a *constant*: "there will always be *solidarity* between a function and ... its functives: a function is inconceivable without its terminals" (OSG p. 44, italics mine). Thus the conclusion that *manifestation* in this respect should be a *selection* does not hold good: as regards form and substance, manifestation is a *solidarity*. This implies, of course, that *manifestation* should have two definitions or that a new term should be coined. The definition of manifestation as OSG gives it applies to examples such as that of the ablative with or without *sine* (OSG p. 24) but not to the case of form and substance.

This mixing up of the two viewpoints has had its consequences in the definition of "*form*". *Form* is defined as: the constant in a manifestation, but *manifestation* in its turn is defined as: a selection in which the linguistic form is the constant. In these circular definitions the form remains undefined.

The point is that, as Eli Fischer-Jørgensen hinted at already (*Review OSG* p. 92), the substance is also a constant, though of a different nature from the form.

It seems that the two points of view are not clearly distinguished either in the recent article *La stratification du langage* (1954.)

Although in this article we find statements such as “à l’intérieur de chaque plan, forme et substance sont mutuellement complémentaires”, there is also the following passage: “Puisque la détermination (fonction unilatérale entre la substance comme variable et la forme comme constante) n’est valable que du seul point de vue syntagmatique (comme une sélection), tandis que du point de vue paradigmatique il y a réciprocité (plus particulièrement: complémentarité) entre forme et substance, la substance ne peut jouer le rôle d’une variable que dans les cas nets où pour l’analyse immédiate le syntagmatique est seul en cause. Dans ces cas donc, il paraît certain que le champ de relation entre les plans peut être concentré de la façon indiquée, c’est à dire à ne comprendre que la forme seule, tandis qu’on peut prévoir d’autres cas, rendus plus compliqués par le fait d’un concours entre syntagmatique et paradigmatique, et où par conséquent la substance doit être comprise dans les deux plans (ou dans les grandeurs qui en relèvent) pour définir les fonctions qu’ils contractent entre eux” (p. 171). I believe that the difficulty of the matter lies in the fact that “substance” is not distinguished from “kind of substance” (sound, ink, etc.). It is difficult to imagine a “syntagmatic” and a “paradigmatic” view of the two planes, but whatever way we view them, it will appear, I believe, that there is selection only between the form and the ‘kind’ of substance, whereas between the form and substance as substance, there is always reciprocity (see above).

2. *Meaning*

Just like the glossematic conception of the “sign”, the glossematic conception of “meaning” is also a purely formal one. “Meaning” is reduced to a purely contextual meaning: “... from the point of view we have assumed — the continued analysis on the basis of functions in the text — there exist no other perceivable meanings than contextual meanings; any entity, and thus also any sign, is defined relatively, not absolutely, and only by its place in the context. ... The so-called lexical meanings in certain signs are nothing but artificially isolated contextual meanings ... in absolute isolation no sign has any meaning; any sign arises in a context, by which we mean a situational or explicit context, it matters not which, since in an unlimited or productive text

(a living language) we can always transform a situational into an explicit context" (OSG p. 41).

There will be no objection to this view as long as we read these words with the stress on "arises": we may assume that every new word in a language, and so also its meaning, arises in a context, mostly in a situational context — the phenomenon of "coining" words is well known.

But ... once the word has been "made" it exists, an indivisible unit of expression and content (meaning), it is always there, ready for use for us to build our sentences with¹). How, then, could Hjelmslev say: "in absolute isolation no sign has any meaning"? Of course — in really absolute isolation no signs are used at all; the sign presupposes a person who gives it and one who receives it — without them a sign could not exist. But this is not how Hjelmslev means these words, he definitely means "isolation" as "deprived of *context*", whether situational or explicit context, and contends that in this kind of isolation a sign has no meaning²).

The matter is that Hjelmslev's term "*context*" has a wider meaning than it has in ordinary usage. Taking our cue from the above quotation from OSG p. 41, where a "productive text" is used in the sense of a "living language", we might say that in glossematics the context of a word is simply: the language it belongs to. The line that separates "system" and "process" is blurred by such a wide interpretation of the term "*context*" as glossematics uses: it seems to include both syntagmatic and paradigmatic relations (see p. 19, 20). Referring to Hjelmslev's example of the colours (OSG p. 49, see p. 147 of the present), his statement that every meaning is a contextual meaning might perhaps be illustrated as follows: the meaning 'blue' is marked off on one side by the meaning 'green', on another by the meaning 'gray' etc. If no sign 'green' and no sign 'gray' occurred anywhere in the text (i.e.: should never be used in the language), the meaning 'blue' would probably cover also what is now covered by the meanings 'green' and 'gray'.

¹) Reichling has dealt with this problem in extenso (*Het Woord* p. 90 ff.).

²) Cf. what Robins says with regard to Bloomfield's conception of meaning: "It is within the context of the 'whole man', however intractable some parts of this context may be to 'scientific' treatment, that words have meaning in the sense of 'meaning' that a descriptive linguist has to understand, and state". (R. H. Robins, *A Problem in the Statement of Meanings*. *Lingua* III, 2, 1952, p. 129).

Hockett's distinction between 'external' and 'internal' meaning is helpful, but the latter should not, as Hockett does, be identified with Hjelmslev's 'contextual meaning'. Hockett's 'internal' and 'external' meanings are both "substantial" in a glossematic sense: the external meaning being "the associations between linguistic forms and non-linguistic things or situations", the internal meaning: "the associations between linguistic forms and other linguistic forms in the stream of speech" (*Review Recherches* p. 94). Hjelmslev's "contextual meaning", on the contrary, is purely formal: with a variant of de Saussure we might say it is the content which is what the other contents are not. If it did not violate glossematic terminology we might almost put it thus: glossematics includes in its *context* what is ordinarily called the *sign system*. The glossematic *content-form* might be described as a "contextual form" in the glossematic sense, which is defined only by its relations to the other content-forms, and which may be realized in different "contextual meanings" in the ordinary sense.

But this "paradigmatic" glossematic conception of the "context" reveals the curious fact that the glossematic "*content-form*" and the traditional "*lexical meaning*", which just as the "content-form" may also be "realized" in different "contextual meanings" in the ordinary sense, cover much the same ground.

There is another explanation of Hjelmslev's statement that all meaning is contextual meaning. Besides the explanation given above by means of the glossematic conception of context, there is Reichling's explanation of the statement. Reichling takes "context" in the ordinary sense and sees at the bottom of such statements as Hjelmslev's a failure to distinguish between "naming" and "symbolizing" on one hand, and between the "use of language" and "reflection on language" or "observation of language" on the other.

"It is true", says Reichling, "that outside the sentence the word does not "name" anything — but does not it "symbolize" anything either, has it no *meaning*? ... If we take this distinction into account, it is clear that a word, as a moment of *reflection*, of *observation*, does have *meaning*. We need only think of any word whatever to know at once that it can name either this or that.

How do we know? Because we actualized its *meaning* and reflected on this meaning *as such*, i.e. as connected with speech". (*Het Woord*, p. 358, translation mine). Reichling comes down to Hjelmslev's "contextual meaning" in the glossematic sense when he states that the word 'tree' for instance, is always defined at least by being marked off against all that is not 'tree', and that this is what de Saussure called a "valeur" (*Het Woord*, p. 358–359). And indeed, if we follow the glossematic usage and call all that is not 'tree' its "context", the meaning of the sign is saved by glossematics too, also outside a "context" in the usual sense of the word. And what is more, thus even the autonomy of the word would be saved.

Here we have reached the crucial point. At the basis of the difficulties described just now, there is, in my opinion, Hjelmslev's refusal to recognize the autonomy of the word unit as a sign: "in-act-iv-ate-s" is five signs (OSG p. 40). In this respect too, OSG is directly opposed to Reichling's theory of the sign¹).

Reichling does not deny that parts of words can *have* meaning but he stresses their difference from words in that they *are* no autonomous units of meaning, as words are. Reichling has foreseen the consequences of an ignoring of this difference, consequences which we see realized in glossematic theory: "A linguistics which does not know of the aspect of *unity* that meaning has, must inevitably arrive at a conception of meaning as a complexity of "ideas". And from there it is only a few steps to the view that parts of words can have "meaning" in the same way as the word has meaning" (*Het Woord*, p. 318, translation mine).

His wide interpretation of the term "context" enables Hjelmslev to deny in theory the autonomy of the word "in isolation", because "in isolation" in a glossematic sense simply means "outside language", and yet to work with the word "in isolation" in the usual sense. On every page in OSG and throughout all his publications it is evident that in practice Hjelmslev takes the autonomy of the word as a unit of meaning for granted.

When Hjelmslev states that outside a context no sign has any meaning, and that "any entity, and thus also any sign, is defined

¹) Cf. Brøndal, who says that the only linguistic reality on which an analysis can be based is the word: "Den eneste sproglige Realitet, hvorpaa en Inddeling kan grundes, er Ordet". (p. 208).

relatively, not absolutely, and only by its place in the context", we must take "context" in its glossematic sense just described. If we took it in its usual sense, the commutation test, to mention but one operation, would be impossible. In the commutation test we discover, for instance, the phonemes of a language by finding out if a change of phonemes in a word brings about a change of meaning. Surely Hjelmslev does not imagine this test always to take place between complete sentences as the smallest possible units to apply it to. According to the statement that in isolation (in the ordinary sense) no sign has any meaning we could never content ourselves with contrasting e.g. 'bat' and 'back' because these two 'signs' would have no meaning, isolated as they would be from any context; we would always have to put them in a sentence to get any result, so: 'I see a bag' — 'I see a back'. And even so — what would the difference in meaning between *these* units depend on? Is it only the difference between *g* and *k* — all the rest of the two sentences meaning the same: 'I see a ba-'? Not at all: the difference is that between the complete units 'bag' and 'back' ¹).

This is another proof of the unity of the word, of its autonomy as a unit of meaning. The sentence is not such an unbreakable unit: if we change one part of a sentence the meaning of all the rest of the sentence remains the same: '*I see a ...*' in my above example. If we change one part of a word, on the contrary, the meaning of all the rest of the word changes too: 'bag' as a whole means something different from 'back' as a whole, and 'ba-' means nothing. It may seem superfluous to state such elementary truths, but sometimes it might be profitable to bring them to mind again ²).

As inductive experience shows, there comes a stage in the analysis of the expression when the entities yielded no longer

¹) The "lexical items"; see Fries: *Meaning and Linguistic Analysis*, Language 30, 1954, no. 1, part 1, p. 65.

J. Fourquet says the same with regard to his examples: Fr. 'bord - 'port' and 'bas' - 'pas': "La différence *b*: *p* n'a ici aucun sens par elle-même; elle ne prend un sens qu'en présence du reste des éléments, -or dans *bord* - *port*, -a dans *bas* - *pas*, etc." (*Analyse linguistique et analyse phonologique*, TCLC V, 1949, p. 39). Yet he seems to contradict himself in his German example on p. 42, where he says that in "sie finden - sie fanden" "la différence de voyelle *i* : *a* peut être isolée parce qu'attachée à l'opposition "présent: prétérit".

²) See also Reichling, *Het Woord* p. 353.

'bear meaning', and thus no longer are sign-expressions (syllables, phonemes) (OSG p. 42). But it must be realized that an entity can sometimes be of the same extension as an entity of a higher degree: a *word* may consist of *one phoneme*. In that case the entity in question will have to be transferred unanalyzed from operation to operation. Thus, "from one point of view (in one analytical operation) the *s* in *in-act-iv-ate-s* is a sign-expression, from another point of view (in another analytical operation) a phoneme": we should not identify the sign-expression with that phoneme; the phoneme *s* enters into other combinations where it is not a sign-expression (e.g. in the word 'sell') (OSG p. 42). "Such considerations", says Hjelmslev, "lead us to abandon the attempt to analyze into "signs"" (OSG p. 42).

What Hjelmslev would actually be led to abandon, however, is in my opinion only the attempt to analyze into "parts of signs" such as the *s* in 'inactivates', which he also calls "signs". If, in the statement last quoted, "signs" should mean *words* as well, the statement would seem to be superfluous: we could not 'abandon' the 'attempt' to analyze into these because there has never been such an 'attempt': it has never been necessary to make an 'attempt' to find the signs (words) of a language we know, they are the directly given data on which every linguist, and Hjelmslev not excepted, *in practice* builds his whole analysis ²⁾.

OSG continues: "... and we are led to recognize that a description in accordance with our principles must analyze content and expression separately ...". This is so much at variance with a) what Hjelmslev himself says further down about the sign function as the only "objective criterion capable of yielding a useful basis of analysis" (OSG p. 45), and b) with what he *does* in practice with his commutation test, (q.v.) and c) with the fact that in order to analyze 'content' and 'expression' we must first analyze the sign (word) into these two entities, that one cannot help thinking that this whole sentence, which is not to be found in the Danish original, must be a slip and has carelessly been inserted in the English translation, to replace a whole page of the Danish edition of OSG which has been dropped from the English one, and with reason (see further down).

²⁾ It is interesting to find Hockett explaining some of Hjelmslev's methodological procedures, criticized by him, as stemming "in part from focusing fundamentally on 'words' rather than utterances ..." (*Review Recherches* p. 94).

The same inconsistency with regard to the treatment of the *word* is to be found in many publications.

Diderichsen, in his paper "*Morpheme Categories in Modern Danish*" (TCLC V, p. 136), says that "the sign must be a unit of secondary importance . . . and the main task of glossematics is thus to set up plerematic and cenematic invariants and to examine their mutual relations. The primacy of the word has been lost beyond recall", whereas on the preceding page the author states: "For the setting up of minimal invariants in both planes the principle of "commutation" is decisive". And — commutation is performed with *signs*.

Nida, (*Morphology*, p. 1) states that morphemes are the minimal *meaningful* units, and then mentions among his examples: *-ceive*, and *-mand*; I doubt if the meaning of these units is clear to anyone who does not know historical linguistics. On p. 60 we find *cran-* (from *cranberry*, see Bloomfield, *Language* p. 160) and *-er* (in *ladder*, *otter*, *hammer*) mentioned as morphemes, so as *meaningful* units. Further: although in the English series: *slide*, *slush*, *slip*, *slime* etc. there is a common meaningful relationship "smoothly wet", which is connected with the element *sl-*, we must not count this element a morpheme, because it does "not occur with free forms or with forms which occur in other combinations" (p. 61). But it does: the "form" *-ush*, for instance, occurs, besides in *slush*, also in the "other combinations": *flush*, *crush*, *blush*, etc. Why should not *sl-* be a morpheme when its "meaning" is so much easier to feel than the "meaning" of *-ceive* in, for instance, *perceive*, *deceive* and *conceive*? Nida's morphological analysis is based on the assumption that the meaning of the *words* of the language analyzed is known.

Knud Togeby says: "L'objection la plus grave à la définition du mot comme signe minimum est l'existence des éléments de flexion et de dérivation" (*Qu'est-ce qu'un mot?* TCLC V, 1949, p. 100). Yet there is the following remark by the same author: "Enfin le rapport du thème et du suffixe est particulièrement intéressant: syntactiquement la racine présuppose le suffixe qui décide de la classe formelle du mot, mais morphologiquement le suffixe présuppose la racine, *ne pouvant pas exister sans elle*". (*Structure immanente de la langue française*, TCLC VI, 1951, p. 23, italics mine). This statement seems to point to something like unity of the word.

And: although Togeby reproaches Pike, de Groot, and even Hjelmslev, of using the term 'word' instead of 'group of syllables', his own criterion for a 'groupe de syllabes' is the criterion of the word: *isolatability* (p. 44).

Finally, E. M. Uhlenbeck says, as regards morpheme-analysis: "Although a few years ago (the reference is to his article in *Lingua* II, 3 (1950) p. 251) we thought it had to be admitted that this morpheme-analysis meant a great advance in linguistics, we now hold a contrary opinion. This change in our theoretical opinions has been caused just by our *purely empirical morphological research* in recent years. *The facts force us to the opinion that the morpheme, in contradistinction to the word, is not a linguistic unit. It is merely a moment in a word*". (*The Study of Wordclasses in Javanese*. *Lingua* III, 3, 1953, p. 326. Italics mine).

3. *Figurae*

Hjelmslev has been one of the first to show that there is something wrong with the definition of language as a 'sign system': "in order to be fully adequate it must always be ready to form new signs, new words and new roots" (OSG p. 43). This means of course that we can never put the complete sign system before us, that the sign system can never even be said to be "complete". In the definition of language as a sign system two things are mixed up, according to Reichling: the language system and the language fund: the whole of linguistic means of expression that a linguistic community has at its disposal (*De Taalschat*, Encycl. Handb. v.h. Mod. Denken, 1951). And Hjelmslev seems to realize that signs belong in the language *fund*, although he does not mention the word. For, according to him languages are "first and foremost ... systems of *figurae* that can be used to construct signs" (OSG p. 43).

But when languages are "first and foremost" systems of *figurae*, this implies that in the second place they are something else. What this "something else" is Hjelmslev does not say. The context, where "system of *figurae*" is opposed to "sign system", leads us to think that he means that languages are in the second place sign systems; but then again the last sentence of the chapter tells us that the definition of language as a sign system "concerns only the *external* functions of a language, its relation to the *non-linguistic* factors that surround it, but *not its proper, internal functions*" (ibid., italics mine). What is it, then, that belongs *in the second place* to "its proper, internal functions"?

The only answer that Hjelmslev gives is a hint, and I am not sure whether he even means it as a hint: he says that languages are systems of *figurae* "that can be *used* to construct signs" (italics

mine), and then he means signs of various extent: morphemes, words, sentences.

It is in this term *used* that the answer to our question lies, as we shall presently see. But it shows us something else as well: *how* are the *figurae* of a language used to construct signs? By combining them in various ways. But — was it not these very combinations, the mutual relations that mattered only? Ought not the glossematic definition of a language have run: “languages are systems of *relations* of *figurae*”?

The above yields us two conclusions:

1) The ‘*figurae*’ of glossematics, the “non-signs” that “enter into a sign system as parts of signs” (OSG p. 43), seem to approach very near indeed to the ‘phonemes’ of phonology.

2) It is the *use* of the *figurae* which should also be included in the concept of language system. It concerns the combinations of the *figurae* into signs and the combinations of the signs into ever larger “signs”. We have not presented the system of a language when we have only presented the smallest units it works with, whether we call them phonemes or *figurae*. The language system covers, as Reichling puts it, “all the factors which determine linguistic constructions and their use”. (*Het Taalsysteem*, Encycl. Handb. v.h. Mod. Denken).

In point of fact, this definition of the language system agrees better with the use Hjelmslev himself makes of the term in many places of OSG, than his own definition does. Repeatedly he states that the system is that “with the help of which we can construct new texts” (OSG p. 16) and he criticizes the idea that morphology should lend itself “only to a description of systems and syntax only to a description of processes” (OSG p. 25). Also in the context of glossematic theory, therefore, the definition of the language system as “a system of *figurae*” is unsatisfactory. This could perhaps be the reason of the introduction of the term “linguistic *schema*” later on (OSG p. 68), to cover the whole of linguistic ‘form’.

4. *Schema and Usage*

Linguistics has long been accustomed to the distinction between ‘*langue*’ and ‘*parole*’, ‘*language*’ and ‘*speech*’, ‘*Sprache*’ and ‘*Rede*’.

In his first book, *Principes*, Hjelmslev departed from this distinction and in many subsequent publications assumed various different subdivisions of language, until in 1943, in OSG and a Danish article, he appears to have returned to the old dichotomy, be it under other names.

In Ch. 15 OSG Hjelmslev introduces the distinction between linguistic schema and linguistic usage.

Linguistic schema is "the linguistic hierarchy discovered through the linguistic deduction" (OSG p. 73), or the "*form* that is a language", as it is put at the back of the English translation (Def. 90).

Linguistic usage is "the resultants of the non-linguistic hierarchy, when they are ordered to a linguistic schema" (OSG p. 73), or, as the English translation has it among its definitions: "the *substance* that manifests a linguistic schema" (Def. 91) ¹.

In Hjelmslev's earlier works we find language divided not into these two, but into three terms, though not the same three every time; and sometimes even a fourth term seems to come in:

1929 ("*Principes*"): „*Le système*” is distinguished from "*la parole*", to which the individual differences are said to belong. Besides these two, every group has also its own common system, "qui est comme une projection d'ensemble de toutes les particularités individuelles"; this system is called the "*norme*" (p. 238). "La norme (est) un idéal qui s'impose à tous les sujets faisant partie d'un même groupe social" (p. 239). The norm rests on a kind of "contrat social", and it is "extérieure aux irrégularités de la parole" (p. 240). The norm need not necessarily agree with the "*correction grammaticale*", which is something artificial, the privilege of a minority, whose "état de langue" is always different from that of the "masse parlante" (p. 241).

What is called "norm" in *Principes* seems to be called "usage" in 1935 ("*Synspunkter for dansk fonetik*"), but the difficulty is that in this paper the term "norm" is also used. Three parts are distinguished: *the system*, "a potential net of fixed relations between the elements of language" (p. 7, translation mine), *the norm*, "a set of rules which are based on the system and which fix the necessary limits of variability for each element" (id.), and the "*usus*", the usage or way of speaking (litt. the "fashion" of speaking) that prevail in a certain community. The limits fixed by the usage are narrower than those fixed by the norm.

¹) That in OSG the *usage* is subsumed under the *substance* finds its explanation in the very wide glossematic conception of linguistic substance, see p. 18 above.

Danish *r*, for instance, is a uvular *r* in one usus, an alveolar *r* in another; but the Danish norm allows both.

In another work of the same year ("*Cas*"), Hjelmslev expressly states that he adds one term to the two of de Saussure (*langue-parole*), but actually we see a fourth creep in: Hjelmslev here enumerates the parts of language as *parole*: "l'exécution de la langue par l'individu"; *l'usage*: "l'exécution habituelle de la langue par la masse" (p. 51), "l'ensemble des façons d'exécution préférées" (p. 88); and *la norme*: "le système et les distinctions exigées par lui". "...c'est la norme qui constitue seule la véritable objet de la linguistique" (p. 51). P. 88: "*Le système* se révèle immédiatement *dans la norme*, qui fixe par des règles la latitude possible des variations dans l'exécution par la parole". "Le système est un ensemble de possibilités entre lesquels l'usage fait un choix". This shows that system and norm are thought of as two different things¹); thus giving four different aspects of language altogether.

In the third paper of 1935, "*On the Principles of Phonematics*", these four aspects are more explicitly mentioned, although Hjelmslev still speaks of "*three* different parts": a central part, *the system*, then "*the norm*: a set of rules depending on the system, and fixing the necessary limit of variability of each element", and thirdly "*the usage* adopted by a given community". But Hjelmslev adds that "these three elements are different from "*la parole*", which is the use of language by a single individual". Which, again, gives *four* parts in all.

In 1936 ("*Synopsis*") four parts are actually distinguished again, but again language is said to consist of only *three* concentric parts: *the system*, *the norm* and *the usage* (p. 2). Besides these, however, *the practice* is mentioned, which is "the use to which language is put by the individual speaker", and which is said to correspond to de Saussure's "*parole*". Here again we find the same stress on the importance of the norm, which is taken in the same sense as in 1935 (see above): "The norm is found by abstraction from a norm or norms, the more norms taken into consideration, the more abstract, less specified, the common norm will be. Thus a norm comprising a group of languages contains fewer rules than a norm comprising only one language or dialect. The most abstract norm possible is the one which is common to all languages, known or unknown. *To recognize and describe this norm is the chief object of general linguistics*" (p. 2). *The system* is here defined as "the elements (of a language) arranged in a pattern of mutual relations", so not as a "*potential pattern*" (c.f. "*Synspunkter*") nor as a pattern of "*possibilities*" (c.f. "*Cas*").

¹) The distinction seems to run parallel with the later distinction between "system" and "schema"; (see p. 139).

After we have found the same distinction between *system*, *norm* and *usage* in 1939 ("*Structure Morphologique*"), a change sets in in the years of 1941–43, when Hjelmslev seems to return to a simpler division:

In 1941, in a rather popular article it is true, he uses only two terms: *system* and *usage*. ("sprogbygning" and "sprogbrug", "*Et par sprogteoretiske betragtninger*" p. 85) ¹⁾.

In 1942 ("*Langue et Parole*") ²⁾ the four terms used in the papers and books of 1935 are discussed and two are definitely rejected, "*system*" (now called "*schéma*") and "*usage*" being the only ones retained.

De Saussure's "*parole*", which in a previous paper was called "practice" by Hjelmslev, is now called "*acte*". De Saussure's "*langue*", according to Hjelmslev, can be divided into three different conceptions:

a) *forme pure*, définie indépendamment de sa réalisation sociale et de sa manifestation matérielle (Hjelmslev's "*schéma*").

b) *forme matérielle*, définie par une réalisation sociale donnée mais indépendamment encore du détail de la manifestation (*Cours* p. 32, 56) (Hjelmslev's "*norme*").

c) *ensemble des habitudes* adoptées dans une société donnée, et définie par les manifestations observées (*Cours* p. 112, 131, 138) (Hjelmslev's "*usage*").

The chief division between these four parts is that between "forme pure" and "substance", says Hjelmslev. The *schéma* is the theory of the *institution*, of the *forme*. The *norme*, *usage*, and *acte* are the theory of the *exécution*, of the *substance*. The last three together have but one object: "... *l'usage*, par rapport auquel la *norme* est une abstraction et *l'acte* une concrétisation, la *norme* n'est ... qu'une construction artificielle et *l'acte* ... n'est qu'un document passager". The *norm* is a fiction, Hjelmslev says now, while *schéma*, *usage* and *acte* are realities: "*Norme* est une abstraction, tirée de *l'usage* par un artifice de méthode, elle est superflue". And the *acte* will never transgress the limits of the *usage*, as soon as this should happen the description of the *usage* ought to be revised. Therefore the distinction between *schéma* and *usage* is the only "subdivision qui s'impose à la sémiologie", and Hjelmslev wants to substitute it for de Saussure's distinction between "langue" and "parole", which, he says, is only a first imperfect step in this direction. (This because Hjelmslev takes de Saussure's "parole" as meaning the speech of only *one* individual).

Thus, in this article it is said expressly that the *norme* is a superfluous concept and it is implied that the *acte* is, too.

¹⁾ Årbog for Nordisk Målstræv IV, 1941, pp. 81–88.

²⁾ Cahiers F. de Saussure 2, 1942, p. 29–45. (The article is dated March 1943).

In 1943 we find the same sort of discussion in "*Sprogbygning og Sprogbrug*". Here, too, Hjelmslev at first comes to a division into four parts: *system* ("sprogbygning"), *norm*, *usage* (usus), and *act* (akt). An element, *l* for instance, is

- 1) in the *system*: *l* defined by its "rapports".
- 2) in the *norm*: *l* as a lateral, this applies only to its manifestation in sound.
- 3) in the *usage*: *l* as alveolar, non-fricative, labialized or not, etc.
- 4) in the *act*: one single *l* as pronounced hic et nunc.

Here, again, Hjelmslev states that de Saussure, though he seemed to draw an essential demarcation line between 1) on one hand and 2)–4) on the other, yet understands by "langue" mainly 1)–3) and by "parole" only 4).

Meanwhile Hjelmslev wants to make the manifestation the only basis of division, and divide into: 1) the manifested, and thus the presupposed (*system*) and 2) the manifesting and thus what presupposes (usus in a wider sense) (thus abandoning de Saussure's division *langue-parole*, or rather defining it in another way than was done so far. As 4), the individual act, is only an individual usus (3), the difference between 3) and 4) is only an irrelevant difference of degree. 2) is an artificial abstraction. And it is interesting to see what Hjelmslev has now come to understand by 'norm':

"What should be the elements of the *norm* according to the usual conception: in the expression the phonemes and the graphemes, in the content (synchronic) basic meanings, are classes of single entities of substance (single sounds, single symbols of writing, special meanings); inductively, by a projection of the hierarchy of the linguistic system on the linguistic usage, these are collected into the said classes. From the point of view of substance these classes cannot but be arbitrary and artificially created syncretisms (neutralisations) of the specimens they contain. They are only *defined* by the fact that they manifest certain entities of the system, from the point of view of the substance they can only be *described* inductively. They cannot be defined by means of "constant" or "relevant" properties of all the members that belong to them. They can only be described by finding out which properties are prevailing among their members (e.g., which properties prevail with the Danish *l*'s observed so far). . . . The concept of *norm* in present day linguistics presupposes something substantially constant and absolute . . . which can only be obtained by uncontrollable intuition. This is what phonology does with regard to the expression, and semantics with regard to the content. In that sense linguistics would do well to dismiss the norm and its concepts (phonemes, basic meanings), and only to

retain, with Zwirner, the *norm* in the sense of “the statistically found average value, that which is *normal* (p. 7, 8, translation mine).

Thus it is that in 1943 Hjelmslev seems to have returned to the first and most simple main division of language, which to all intents and purposes is yet the same as de Saussure's: that between ‘system’ and ‘usage’, between ‘langue’ and ‘parole’, when in OSG he distinguishes between ‘*schema*’ and ‘*usage*’. But — it is his *main* division: there is still the ‘*language system*’, and the reason why ‘*scheme*’ is introduced may probably be found in the fact that he uses ‘*language system*’ in OSG for the mere ‘*system of figurae*’. Thus the need for a new term is felt in order to denote what is normally understood by a language system: *the whole of the language ‘form’*. (See pp. 139, 140 of the present).

In a recent publication from Hjelmslev's hand, however, all the old terms are restored again: *La stratification du langage* ²⁾ presents the following distinctions:

La parole: “tout ce qui est arbitraire dans le langage. ... l'ensemble des relations interstratiques ³⁾ effectivement exécutées”.

L'usage: “ce qu'il y a de stabilisé dans la parole. ... l'ensemble des connexions interstratiques effectivement exécutées”.

L'acte: “Les combinaisons qui sont des variantes des connexions interstratiques appartiennent à la parole sans appartenir à l'usage. Elles constituent, en d'autres termes, ce qui reste de la parole en soustrayant l'usage”.

La norme: “l'ensemble des relations interstratiques possibles”.

Le schéma: „Le schéma sémiotique (et linguistique) par contre est en dehors de cet ordre d'idées: ce terme ne se rapporte qu'aux fonctions intrinsèques ⁴⁾ dans la forme de chacun des plans pris à part” (p. 188).

Just a few remarks about the passage that has been left out in the English translation, probably because it contained some

¹⁾ Substance vgl. p. 101.

²⁾ Word 10, 2-3, 1954, p. 163-189.

³⁾ *Relations interstratiques*: “les relations entre strata” (manifestation d'une part, relation sémiotique ou dénotation, de l'autre), the “strata” being the four parts: content-form, content-substance, expression-form, and expression-substance.

⁴⁾ *Fonctions intrinsèques*: “les relations qui valent à l'intérieur d'un seul et même stratum” (p. 183).

contradictions. In it Hjelmslev states that in the analysis two boundaries are passed:

I that between non-restricted and restricted inventories of units,

II that between sign and non-sign.

In italics Hjelmslev states that "the transition from sign to non-sign (II) is never later than that from unrestricted to restricted inventories" (I)¹⁾.

However: Every language has a limited number of *endings*, but seeing that from the glossematic viewpoint they are still *signs* we have in this case transition II *later* than transition I.

Secondly: at the end of the passage on p. 43 the rule is formulated again as follows: "In all languages it seems to be true that as soon as we arrive below the limit of signs we have to do with a restricted inventory in all classes: syllables, and phonemes even more so, are of a restricted number"²⁾. This is the opposite, however, of what was stated in the rule itself, that as soon as we arrive at a restricted inventory we have to do with non-signs, which leaves open the possibility that II (transition sign — non-sign) lies *before* I (transition non-restricted — restricted inventory), that we may have non-signs *before* we have a restricted inventory.

In view of this I believe it is an improvement that this passage has been left out in the English edition, and it is only to be regretted that such a statement as that about the necessity to abandon the analysis into signs has been put in its place.

¹⁾ "Der viser sig at gælde den lov, at overgangen fra tegn til ikketegn aldrig ligger senere end overgangen fra ubegrænsede til begrænsede inventarer" (OSG p. 42).

²⁾ "... i alle sprog synes det at gælde, at saa snart vi kommer ned under tegnenes undergrænse har vi at gøre med begrænset inventar i alle klasser: stavelserne og endnu mere fonemerne er af et begrænset antal" (OSG p. 43).

CHAPTER VIII

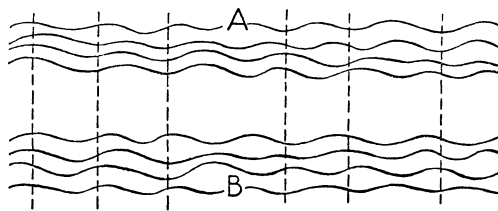
THE LINGUISTIC SIGN: THE SIGN AND PURPORT

1. *Purport: De Saussure's division of the "masse amorphe".*

For a good understanding of Hjelmslev's views concerning what he calls the "purport" it is necessary to go back for a moment to de Saussure's *Cours*.

Hjelmslev himself quotes from the *Cours* the following:

"Prise en elle-même, la pensée est comme une nébuleuse où rien n'est nécessairement délimité. Il n'y a pas d'idées préétablies, et rien n'est distinct avant l'apparition de la langue. ... La substance phonique n'est pas plus fixe ni plus rigide; ce n'est pas un moule dont la pensée doit nécessairement épouser les formes, mais une matière plastique qui se divise à son tour en parties distinctes pour fournir les signifiants dont la pensée a besoin. Nous pouvons donc représenter la langue ... comme une série de subdivisions contiguës dessinées à la fois sur le plan indéfini des idées confuses ... et sur celui non moins indéterminé des sons ... la langue élabore ses unités en se constituant entre deux masses amorphes ... cette combinaison produit une forme, non une substance. (pp. 155–157). Hjelmslev does not give the scheme which de Saussure gives of this articulation:



in which A is "le plan indéfini des idées confuses", and B "celui non moins indéterminé des sons".

However, there are two features in this scheme and in the passage quoted which, if subjected to a more thorough examination, appear to be confusing.

The first is the representation of thought and human sound, before the appearance of language, as amorphous masses.

What is the "substance", one would ask, of those amorphous masses? If we have an amorphous mass of something we should at least be able to say what that "something" is. But the "amorphous mass of sound" is not located somewhere by de Saussure, nor are its sources indicated in any way, and an "amorphous mass of thought" — what is it? De Saussure speaks of "une nébuleuse" in which nothing is delimited or distinct, but — is this to be called "thought"? Later on de Saussure speaks of "des idées confuses", but as soon as there are ideas, even though they should be "confused ideas", we have something delimited in one way or another, and no longer only "une nébuleuse" in itself. In short: an amorphous mass of thought and an amorphous mass of sound is beyond all control.

Of course it is quite true that there is an interplay between language and thought, it is also true that the various content-forms and expression-forms recognized by a language are different for every language; and even that each of these "forms" is marked off by the forms surrounding it. This is illustrated by Hjelmslev's examples:

For the *content plane* he uses the words for colours in different languages. Welsh, for instance, has in its content plane the element 'glas', which covers the English content-element 'blue'. But it also includes the bluish green which the English call no longer blue but green, plus the bluish grey which in English is called 'gray': it 'covers' part of the English content-elements 'gray' and 'green'. For the other shades of gray, the brownish ones, the Welsh have another word: "llwyd", which also includes, however, what in English is called 'brown'. Hjelmslev represents it in the following scheme (OSG p. 49):

<i>English</i>	<i>Welsh</i>
green	
blue	glas
gray	
brown	llwyd

As an example of the elements marked off in this way by different languages in the *expression plane* Hjelmslev gives "the continuum made by the median profile of the roof of the mouth, from the pharynx to the lips". (What is meant is, of course, the *sounds* produced in the various places of this "continuum", not the continuum itself). In familiar languages this zone is usually divided into three areas, a back *k*-area, a middle *t*-area, and a front *p*-area. Eskimo and Lettish, however, have two *k*-areas, whose lines of division do not coincide in the two languages: Eskimo places the boundary between a uvular and a velar area, Lettish between a velar and a velo-palatal area. This, too, might be schematically represented:

Engl.	p	t	k
Lett.	p	t	k ¹ k ²
Esk.	p	t	k ¹ k ²

In so far as these schemes are true there is no objection to de Saussure's statement that language, also for its content side, consists of "a series of *contiguous* subdivisions" (*Cours* p. 155/56). It is only the idea of the *amorphous* mass of thought and of sound that presents difficulties to the linguist.

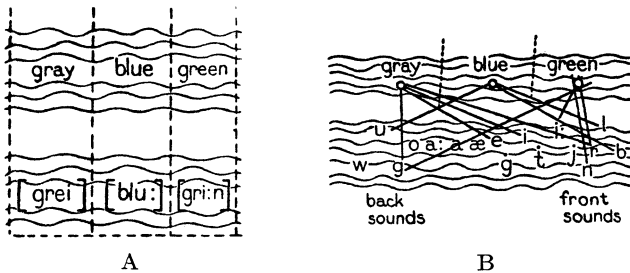
The second point to be remarked on in de Saussure's scheme is: its straight lines: the representation of the smallest elements marked off by language in either plane as directly corresponding with each other.

De Saussure considers language as "une série de subdivisions contiguës". But for that very reason it cannot be represented as de Saussure has done because the elements in the two planes do not correspond. Hjelmslev realized this better than de Saussure did and holds it, rightly in my opinion, for one of the main characteristics of language over against other sign-systems, as will be seen later (p. 218 ff).¹⁾

Again the matter is illustrated by OSG. The two schemes

¹⁾ For another objection to the idea of contiguity see André Martinet: "In the frame of a homogeneous speech community it is probable that the normal range of dispersion of every phoneme in a given context will not be contiguous to those of its neighbours, but that there will be a margin of security in the form of a sort of no man's land" (*Function, Structure, and Sound Change. Word*, 8, no. 1; April 1952, p. 4).

given above will also have made it clear that the *elements* marked off by language in the content plane correspond to *words* (so: *chains*) in the expression plane. And that the *elements* marked off in the expression plane correspond to *nothing at all* in the content plane. So that in practice, for the field of colours, for instance, de Saussure's scheme should not have been like A but like B.



This shows that there is something to be said *against* the following statements of de Saussure, which apply only to the process, whereas de Saussure's examples belong in the paradigmatic plane. He says: *a)* that we can represent "la langue comme une série de subdivisions *contigues* dessinées à la fois sur le plan des idées et sur celui ... des sons" (*Cours* p. 156): Green, blue and gray might be considered as 'neighbours' in the content plane, thus there they would lend themselves to a "subdivision contigue". But in the expression plane the [u:] of 'blue' does not border on the g of 'gray', nor does the n of 'green' border on the b of 'blue': here these sound groups do not lend themselves to a "subdivision contigue". As was said already: Hjelmslev has realized this and makes it one of his criteria for language that the two planes are not "conformal": have no "one-to-one correspondence" between their elements (OSG p. 99).

2. *Purport, Hjelmslev's division of the "masse amorphe".*

Hjelmslev follows de Saussure's conception of the linguistic sign, taking it as "an entity generated by the connection between an expression and a content" (OSG p. 44). We saw on p. 128 ff. in what respect the glossematic conception of the sign is open to criticism. Hjelmslev states expressly that his terms "expression" and "content" are introduced only "as designations of the functives that contract the ... sign function", and that "this is a *purely*

operational and formal definition, and (that) in this context *no other meaning* shall be attached to the terms" (OSG p. 44, italics mine. See for a further discussion section 5 in the present chapter).

Before working out his quotation from de Saussure given on p. 146 of the present, Hjelmslev introduces the concept of "purport", which, he says, is "the factor that is common ... and that remains common to all languages". This purport is defined "only by its having function to the structural principle of language and to all the factors that make languages different from one another" (OSG p. 46). It is hard to grasp what this means but the reader will find a much simpler definition in the apposition to 'purport' used on p. 47, where Hjelmslev gives as an example that Danish "jeg véd det ikke", English "I do not know" and French "je ne sais pas", "despite all their differences, have a factor in common, namely the *purport, the thought itself*" (italics mine). Yet further on it seems as if the *purport* is what de Saussure calls "*the amorphous mass*" both of thought and of sound: it "exists provisionally", says Hjelmslev, "as an amorphous mass, an unanalyzed entity", but "it is ordered, articulated, formed in different ways in the different languages" (OSG p. 47). But ... is the "thought itself" expressed by "Je ne sais pas, I do not know", etc., such an *amorphous* mass? The concept of purport is no more clear than is the concept of the "masse amorphe".

Of this purport as an amorphous mass and its articulation examples are given for the content system, for the content process (text), for the expression system and for the expression process (text):

The examples given for the *system*, both of content and of expression, have already been quoted on p. 147–48: they are clear examples of how the elements of thought (e.g. colours) and the elements of sound are 'formed' differently in different languages, better examples, it proved (see p. 149), than the ones which de Saussure gave. But when Hjelmslev's example for the content system was taken over by the present writer on p. 147, an important feature of it was purposely left out which will be reintroduced here. In fact Hjelmslev does not give this example

of the colour scheme as an illustration only of the non-correspondence of content units in different languages: he also adduces it as an example of the different boundaries that different languages lay in the 'substance' of thought, to which substance belong also the things themselves, the world around us (See p. 164 ff). Let us take Hjelmslev's example of the spectrum as it is given and treat it — be it reluctantly — as a question of "substance of thought". Is Hjelmslev right in saying that on the colour spectrum "each language arbitrarily sets its boundaries"? The answer to this question will depend on what we call *boundaries*. If we mean by it: boundaries between what will be denoted by one word and what by another we can agree: in that respect one language 'groups together into one word' what another language distributes over two. More accurately put: one language has separate words, separate names, for certain aspects of the "purport" which are left unnamed by another language. But would the fact that a language has but one word for two different aspects be an indication that the speakers of that language do not distinguish the two aspects? To return to the colour spectrum: would a Welshman be unable to distinguish between 'greenish glas' and bluish 'glas' and would he be unable to express this difference when it is required, would he be unable to "lay a boundary" between these two? ¹⁾ On the other hand, would an Englishman, who has the words 'green' and 'blue' at his disposal, never feel obliged to speak of 'greenish blue' or of 'bluish green' — although he has no special words for those colours? Whatever we mean by 'purport', there is nothing to prove its existence as an amorphous mass. On the contrary: the very fact that expressions like 'greenish blue' and 'bluish green' exist shows that such distinctions are possible without there being separate words for them ²⁾.

¹⁾ In fact Welsh has a separate word to denote 'green' only, as Miss Draak of Amsterdam University kindly informed me.

²⁾ A more striking example is given by Hjelmslev himself in *Sprogets Indholdsform som Samfundsfaktor*, Det Danske Magasin, I, 2. Aargang, 1954, p. 3. When he mentions the fact that Malay has only one word for 'brother' and 'sister', he rightly states that "malajisk ... kender ikke denne forskel *i sin sprogform*", (italics mine), for of course the Malays distinguish between the two!

The existence of compounds makes the idea of boundaries in the substance of content more obscure. Does English have more boundaries because it has the word 'brother-in-law' where Dutch has the one word 'zwager'? Does Dutch lay more

As to the “boundaries” in the amorphous mass in the *expression* plane: a man whose language recognizes only one *k*-phoneme will subsume both a palatal *k* and a back *k* under his *one k*. But does this mean that he would not be able to distinguish between the two extreme *k* sounds? He will not be able to say just what the difference is, perhaps, but he will certainly hear that there is something ‘funny’ about the *k*’s of a person who speaks with palatal *k*’s where there ought to be back *k*’s, he does distinguish between the two: the “boundary” is there.

The same objections apply to Hjelmslev’s examples of purport in the *process*, both of content and of expression, to which can be added the objection made above: the common purport of the content processes “Je ne sais pas”, “I do not know” etc., cannot exactly be said to be an “amorphous mass of thought”. Nor can the common purport of the expression processes [berli: n], [beru-linu], [b3: lin], viz. the city name “Berlin” — which is Hjelmslev’s example — be said to be an amorphous mass of sound. Also in the expression plane the matter of “boundaries” is a very uncertain one.

3. *Expression and Content: the Straight Lines*

Except for these few remarks it has been possible so far to agree with the glossematic views on the parallelism between the structure of the expression plane and that of the content plane, and there has even been added another point of resemblance between the two planes: in both the larger units are built up out of different smaller units, which may be non-contiguous in the system. Hjelmslev’s examples of Chapter 13 OSG, of which I have mentioned some, give the impression that, contrary to de Saussure, he is of opinion that the expression-side of a word unit does not correspond in structure with its content side, for as

boundaries in the substance when for ‘glove’, it uses the compound ‘handschoen’ (hand-shoe)?

See also Ray’s remark at the Conference of Anthropologists and Linguists 1953, about his research into colour concepts in native North America, especially the so-called green-blue confusion. “Color distinctions that can be made in any culture are vastly greater than the linguistic system permits to be expressed. People may have a pair of terms for intenser blue and intenser green, plus a single term for intermediate, which misleads observers. One finds very little correlation between the linguistic designation of color and anything else in the culture that has to do with color”. (C. F. Voegelin and Thomas A. Sebeok, *Results*, Chapter III, p. 49).

an example of the units of the content plane he takes *word*-contents, whereas he takes *phonemes* as an example of the units of the expression plane. But then, in Chapter 14, it would seem as if Hjelmslev tries to reconcile his theory with de Saussure's scheme of the straight lines, represented on p. 146 of the present.

Hjelmslev does not do so at once: in the first part of Ch. 14 up to and including his exposition of the commutation test ¹⁾, the theory and the examples given are consistent with the ones given in Ch. 13.

But then we find on p. 60: "in the case of signs it will always be the same difference of content that is entailed by one and the same difference of expression, but in the case of *figurae*, one and the same difference of expression may, in each instance, entail different changes between *entities of the content* (e.g. pet – pat, led – lad, ten – tan)". Hjelmslev means that whenever we find the difference [pet] – [pæt], the corresponding contents 'pet' – 'pat' will always differ in the same way; whereas when we change in the expression plane [e] into [æ], there may be many different changes in the content plane: the contents 'pet' – 'pat' differ from each other in another way than the contents 'led' – 'lad', or 'ten' – 'tan'.

The ambiguous part of this statement is that Hjelmslev does not point out that what causes the change, in the content plane, of the system unit 'pet' into 'pat' is not the change, in the expression plane, of the system unit [e] into [æ], but the change of the 'collective unit' [pet] *as a whole* into the 'collective unit' [pæt] *as a whole*.

This was only an ambiguity; but then, at the end of the same page, it seems as if the four examples given in Chapter 13 OSG are discarded and an entirely different start is made to demonstrate the similarity in structure between the two planes: expression and content. It is as if Hjelmslev makes an attempt to fit in his own correct view of the similarity in construction between the two planes into de Saussure's scheme of their direct

¹⁾ The commutation test consists, as said already (p. 135), of substituting one element in one of the two planes by another element. If this change causes a change in the opposite plane it means that the two elements exchanged in the first plane are two *distinct* elements, two *invariants*, as Hjelmslev calls them. [pet – pæt] causes the exchange in the content plane of the contents 'pet' – 'pat', and vice versa: the exchange in the content plane of 'pet' into 'pat' causes a change in the expression plane: [pet – pæt].

correspondence: the scheme of the straight lines. The *word* is now considered as a *chain* of *figurae*, not only in the expression plane but also in the content ¹⁾, and Hjelmslev speaks of “analyzing” the word-content into its “*figurae*”: “It is an inevitable *logical consequence*”, we read at the end of p. 60, “that in the *content plane* as well as in the expression plane this exchange test must enable us to *register figurae*, through an analysis of the minimal sign contents down to the functives (entities and their mutual relations) that compose them. *Quite as in the expression plane, the existence of figurae will only be a logical consequence of the existence of signs.* It may therefore be predicted with certainty that such an analysis can be carried out. ... such a work is a necessary prerequisite for an exhaustive description of the content. Such an exhaustive description presupposes the possibility of explaining and describing an unlimited number of signs, in respect of their content as well, with the aid of a limited number of *figurae*. And ... the lower we can make the number of content-*figurae*, the better we can satisfy the empirical principle in its requirement of the simplest possible description” (italics mine).

Hjelmslev speaks of the “inconsistency” that “such an analysis of the sign-content into content-*figurae* has never been made or even attempted in linguistics ²⁾, although a corresponding analysis of sign-expressions into expression-*figurae* is as old as the very invention of alphabetic writing” (OSG p. 61).

Nowhere does Hjelmslev explain why it should be such an “inevitable logical consequence” of the existence of signs that the exchange test must enable us to register *figurae* smaller than word-contents in the *content*-plane. Perhaps de Saussure’s scheme with the straight lines has influenced Hjelmslev in his tendency, apparent in all his work, to construct a symmetry between the two planes. On the other hand, as we saw, OSG mentions as one of the characteristics of language that it requires two planes which “cannot be shown to have the same structure throughout with a one-to-one relation between the functives of the one plane

¹⁾ OSG p. 65: “In this reduction of content-entities to “groups”, a *sign-content* is equated with a *chain* of *sign-contents* having certain mutual relations”.

²⁾ Garvin (*Review* OSG p. 79) points to Jakobson: *Beitrag zur allgemeinen Kasuslehre* as an example of the contrary (TCLP VI, 1936, p. 240–288). See also the reference to Ogden and Richards, by Voegelin and Sebeok in Chapter III of the *Results*, p. 59.

and the functives of the other" (OSG p. 99). And if we remember what was said on p. 43 OSG about the construction of linguistic signs ¹⁾, we shall know that on the contrary, it is a "logical consequence" of the existence of linguistic signs that out of a *limited number* of expression figurae we can build up the *unlimited number* of sign-expressions required to embody the unlimited number of *sign-contents*, "content-figurae", which together "comprise *all*" ²⁾.

The method of procedure with the analysis described just now will be "exactly the same for the content plane as for the expression plane. Just as the expression of a minimal sign can, through a further analysis on the basis of functions, be resolved into smaller components with mutual relation (as has happened in the ancient discovery of alphabetic writing and in modern phonemic theories), so also the content of a minimal sign must be resolved by such an analysis into smaller components with mutual relations" (OSG p. 61).

We will enter into some details of this method of procedure, but it will be better first to give Hjelmslev's *examples* of it, which speak a clearer language than the explanations and definitions:

Expression: In English, [tʃ] = t + ʃ in all cases. In Polish there is [t], [ʃ], and [tʃ], because the latter is functionally different from a [tʃ] = [t + ʃ]: *trzy* 'three' and *czy* 'whether' differ in pronunciation only by the first's having [tʃ] and the second [ʃ]; so that [tʃ] is to be considered on a line with [t] and [ʃ] in Polish.

Content. If we have registered e.g. the units 'ram', 'ewe', 'sheep', 'he' and 'she', then 'ram' and 'ewe' must be eliminated from the inventory of elements if they can be explained ... as units that include *only* 'he' or 'she' on the one hand and 'sheep' on the other (OSG p. 64) "'Ram' = 'he-sheep' will be different from 'ewe' = 'she-sheep', just as *sl* will be different from, say, *fl*, and 'ram' = 'he-sheep' will be different from 'stallion' = 'he-horse', just as *sl* will be different from, say, *sn*. The exchange of one and only one element for another is in both cases sufficient

¹⁾ "Thus, a language is so ordered that with the help of a handful of figurae and through ever new arrangements of them a legion of signs can be constructed" (OSG p. 43).

²⁾ Cf. E. Fischer-Jørgensen, *Review OSG* p. 88.

to entail an exchange in the other plane of the language" (OSG p. 64).

As regards the *inventories registered*, we saw that "the analysis into *figurae* in the expression plane" consisted in "the resolution of entities that enter unrestricted inventories (e.g. word-expressions) into entities that enter restricted inventories, and this resolution is carried on until only the most restricted inventories remain. *The same will hold true of the analysis into figurae in the content plane. While the inventory of word-contents is unrestricted, in a language of familiar structure even the minimal signs will be distributed (on the basis of relational differences) into some ... inventories, which are unrestricted (e.g., inventories of root-contents), and other ... inventories, which are restricted (e.g., inventories embracing contents of inflectional and derivational endings i.e. derivatives and morphemes).* Thus in practice the procedure consists in trying to analyze the entities that enter the unrestricted inventories purely into entities that enter the restricted inventories. In the example we have used above, this principle is seen to be already carried out in part: while 'sheep', ... and 'horse' remain for the present in unrestricted inventories, 'he' and 'she', in their *quality of pronouns*, stand in a special category, relationally defined, with a restricted number of members. The task will then consist in carrying the analysis further until all inventories have been restricted, and restricted as much as possible. In this reduction of content entities to "groups", a sign-content is equated with a chain of sign-contents having certain mutual relations". (OSG p. 64, 65, italics mine). As an example Hjelmslev mentions "the definitions with which words are translated in a unilingual dictionary", which are in principle of this kind. This brings him to a definition of a *definition*: "by a definition is understood a partition of a sign-content or of a sign-expression" (OSG p. 65).

The following objections could be raised to all this.

The word-content is not structured in the same way as the word-expression.

To mention only a few points of difference:

a) In using the word-expression 'ram' we 'perceive' the unit

consisting of the parts $r + \text{æ} + m$, but in the use of the word-content 'ram' we do not have any knowledge whatsoever of parts like 'he' + 'sheep', no more than we have of the parts 'blue' + 'yellow' in the content 'green'. "'Ram', 'ewe' ... must be eliminated from the inventory of elements if they can be explained ... as relational units that include *only* 'he' or 'she' on the one hand and 'sheep' on the other", says Hjelmslev on p. 63 (*italics mine*). But — 'ram' does not *only* include 'he' + 'sheep', no more than 'green' includes *only* 'blue' and 'yellow', in fact 'green' includes neither 'blue' nor 'yellow', not even to the artist, who knows quite well what 'parts enter into green' ¹⁾). All that can be said is that in a logical analysis of word-contents these features can be ordered as various 'genera' and 'species' with their 'differentiae specificae', but there is not the slightest reason to suppose these orderings to be inherent in the textual word-content. Only in reflecting upon the word-content 'ram' can we bring it in connection with the word-contents 'he' and 'sheep', but this operation is not an analysis of a text but an arrangement of facts which — as parts of the content-unit 'ram' — do not occur in any text and therefore cannot be considered as parts of it in the content-system.

b) In the word-expression 'ram' we have *first* r , *then* æ , and *finally* m , we cannot reverse the order of the elements. The word-content 'ram' — suppose for a moment that it could be analyzed into 'sheep' + 'he', would never be such a chain: the various 'features' 'contained' in a content unit occur to us together ²⁾).

c) Word-expressions are subdivided into 'figurae' *which are no longer expression for a content*. Word-contents are subdivided — if

¹⁾ This property of a linguistic whole: that it has more and different features than all its parts together is discussed at length by Reichling in "Het Woord".

Cf. Bazell: "... the content-unit 'bull' includes every feature attributed *rightly or wrongly* to bulls, and the relevant feature in 'bull-necked' is not the same as that in 'bull-elephant' (*Review OSG* p. 92, *italics mine*).

²⁾ Miss Fischer-Jørgensen explains this analysis of 'ram' into 'sheep + he' by saying that we should not take 'process' in the sense of 'proceeding through *time*': time or order are not implied in Hjelmslev's definition of 'process'. The process is defined by the logical function 'both - and': in 'ram' = 'sheep + he' the two elements do not come the one after the other as $s + a + t$ in "sat" (*Review OSG* p. 84). The example shows that Miss Fischer-Jørgensen does realize that in the *expression*, time, or rather *order*, is a factor implied. She might only have put some more stress on the fact that *order* is a factor not only naturally inherent in the expression, because of the nature of our speech-organs which cannot pronounce two or more sounds at a time, but also a consequence of the fact that the number of expression-figurae is very limited: if 'pot' were only $p + o + t$, irrespective of order, we should need another sign to express either 'pot' or 'top'.

this were possible — into ‘figurae’ *which are always again content for an expression* ¹⁾). Therefore:

If the word-content is equalled to a chain (OSG p. 65) and as such belongs to the content-*process*, and if we could really prove that all the word-contents were built up out of a limited number of ‘content figurae’ (which would each still be content for an expression), this would mean that *we would have to distinguish between ‘chain-words’ and ‘element-words’*. ‘Ram’, e.g., would be a chain-word but ‘he’ would be an element-word.

But when would such a partition be exhausted? ‘Ram’ is not exhausted by ‘he’ + ‘sheep’. ‘Sheep’ is again something like ‘mammal’ + ‘hooves’ + ‘four feet’ + ‘woolly fur’. And is ‘mammal’ — to mention only one of these four — a *basic* entity? Could not it be ‘analyzed’ further into ‘animal’ + ... + ...? And ‘animal’ into ‘living being’ + ... + ...?

When could this division be said to be exhausted ²⁾? A special difficulty is presented by homonyms and cases of conversion: Nida draws attention to these problems in his *Morphology* (pp. 7, 8 and especially pp. 56, 57): “It is difficult to define degrees of difference in meaning, and there are no simple means of deciding whether forms are “distinctly different”, or “related” in meaning”. In many cases “the decision rests with the native speaker of the language, and to this extent the description of any language will be subjective”. But this subjectiveness, says Nida, reflects the actual usage of the language by the native speaker and reveals the live associations, which are constantly operative in producing new formations and in giving rise to new analogical series” (p. 57). Nida quotes Allan Walker Read who stated that some speakers of American English consider as related

¹⁾ It is true that the content ‘sheep’, which is contained in ‘ram’, has no expression *in* the expression ‘ram’, as Martinet points out. “Mais il reste que ces contenus *sont toujours doués d’expression dès qu’ils sont isolés*, tandis que les unités d’expression (M. Martinet gives French *p* and *o*) ne sont, dans le même cas, qu’exceptionnellement affublées d’un contenu (*o* = eau, etc.) (A. Martinet, *Review OSG* p. 39).

Garvin (*Review OSG* p. 94) concludes in this connection: “This adds weight to Martinet’s objection: “Dans ces conditions, nous ne voyons pas comment maintenir, sur ce point central, le parallélisme des deux plans (40)”.

²⁾ “Une définition de dictionnaire par assemblage de notions n’épuise pas le sens d’un mot; tandis que la forme phonique d’un mot peut être acquise à la première rencontre, le sens se précise lentement par une série de “contextes” et peut n’être jamais entièrement connu”. (J. Fourquet, *Analyse linguistique et analyse phonologique, Recherches* p. 47).

words e.g.: *groom* and *bridegroom*; *sand* and *sandblind*; *pun* and *pundit*; *fake* and *fakir*; *bust* and *robust*; *mist* and *mysticism*; and even *sex* and *sextette* (id. p. 57, note).

The examples which Hjelmslev gives of a progress from unrestricted inventories to restricted ones in the analysis of the content plane are all based on an analysis of the expression plane: in the passage quoted on p. 140 he speaks of unrestricted inventories of *rootcontents*", of restricted inventories, "e.g. inventories embracing contents of *derivational* and *inflectional endings*", and of 'he' and 'she' "*in their quality of pronouns*".

The inventories mentioned here, however, for instance "the inventories embracing contents of derivational and inflectional endings" are only restricted in as far as they embrace contents of derivational and inflectional *endings in the expression plane*, because the expression plane has only a limited number of such *endings*; 'he' and 'she' stand in a special category with a restricted number of members only in as far as they are contents of *pronouns in the expression plane*, because the expression plane has only a limited number of such *pronouns*. As far as I can see these examples are right in as far as the content is here analyzed with the *expression as point of departure*. This is the only possible way to analyze the content. We cannot possibly analyze the content plane if the expression plane does not furnish us with the necessary keys. But the kind of analysis of the content propagated here is different from the one propagated at the beginning of the page, that of 'ram' into 'he' + 'sheep'. To that kind of analysis the expression offers not a single clue.

If we try to analyze the content in that way, without the expression plane offering the least points of correspondence, we get lost and have to go on and on without ever getting anywhere. Why, for instance, should in such an analysis 'he' be an 'element' of the content system, why not another content (chain) analyzable e.g. into the contents 'reference' + 'masculinity' + 'human being'? We can only analyze the content of language by means of its expression, and it is the *word* that offers itself as the unmistakable key which will alone open the door to that content ¹⁾.

¹⁾ Cf. Bloomfield, *Language*, p. 139 ff.

Also C. C. Fries: "as a general principle any use of meaning is unscientific when-

4. *The difference between 'Purport', 'Content', and 'Substance'.*

We saw that Hjelmslev's conception of the linguistic sign is: an entity generated by the connection between an expression and a content" and that he meant to define these terms *only* by their being "the functives that contract the ... sign function", so to give of them "a purely operational and formal definition" (OSG p. 44).

Nevertheless, when on p. 46 Hjelmslev speaks of "*content-substance*" he adds in parentheses: (*thought*), and to "*expression-substance*" he adds: (*sound-chain*), which shows, just as all his examples do, that in practice he reckons also with other than their formal features. The same is the case, as was seen, with his definition of 'purport' and his actual usage of the word in practice (See p. 150).

'Purport' and 'content-substance' should not be confused. Both denote the substance of thought, but I hope it has become clear that 'purport' is used for "the amorphous mass of thought-substance" which there is supposed to be without the existence of language; with the existence of language this amorphous purport of thought-substance is formed into forms which contain a portion of that substance, of that purport, and what is contained in these forms is the *content-substance* ¹⁾.

Nor should 'purport' and 'expression-substance' be confused. Both terms are used for the sound-substance, which, as Hjelmslev admits, is a very unusual sense to use the word 'purport' in; he does so, however, to preserve the symmetry between the two planes also in terminology. In Danish, "meningen" is used for both planes, and in French "matière" or "sens" (*La stratification du langage* p. 174). But although 'purport' and 'expression-substance' are both used for the sound-substance, it will have become clear that 'purport' is used for "the amorphous mass of sound-substance" which there is supposed to be without the

ever the fact of our knowing the meaning leads us to stop short of finding the precise formal signals that operate to convey that meaning" (C. C. Fries: *Meaning and Linguistic Analysis*, Language 30, 1954, no. 1, part 1, p. 68).

Guevara is quite right when he calls it one of Hjelmslev's great achievements that he has pointed out (in "*Principes*") that what there is linguistic in grammatical facts is: the *expression*. This, says Guevara, "will make it much easier already to distinguish between grammatical categories and the purely psychological ones ...". (*Los Principios* etc. p. 27, free translation mine).

¹⁾ See p. 151 of the present.

existence of language. With the existence of language this amorphous mass of sound-substance, the amorphous 'purport' of expression, is formed into forms which can be used to express a thought-content, and what is contained in these forms is the expression-substance. Just as the *formed* purport of thought is the 'content' of thought, the *formed* purport of expression might be called the 'content' of expression: that which is 'contained' in the expression-forms. This would stress the symmetry between the planes even more, and would throw light from a different angle on Hjelmslev's statement that there is "no justification for calling one, and not the other, of these entities *expression*, or one, and not the other, *content*" (OSG p. 55), to which statement we shall revert later (p. 165).

In accordance with de Saussure, Hjelmslev lays great stress on the fact that it is *language* which supplies the *forms* both of thought and of sound: "the two entities that contract the sign function — expression and content — behave in the same way in relation to it. By virtue of the sign function and only by virtue of it, exist its two functives, which can now be precisely designated as the *content-form* and the *expression-form*. And by virtue of the content form and the expression-form, and only by virtue of them, exist respectively the content-substance and the expression-substance, which appear by the form's being projected on to the purport, just as an open net casts its shadow down on an undivided surface" (OSG p. 52).

After what was said in the chapter on purport (see p. 149), it will be clear that in the last sentence of this quotation from OSG two small corrections could be made:

Firstly: only by virtue of the content-form and the expression-form "exist respectively the content-substance and the expression-substance" *as such*. When 'purport' is taken in its sense not of 'amorphous mass' but in that of 'thought' and 'human sound', it would seem rather a strong statement to say: 'Purport remains, each time, substance for a new form, and has no possible *existence* except through being substance for one form or another' (OSG p. 48); and " ... the substance depends on the form to such a degree that it lives exclusively by its favor and can in no sense be said to have independent *existence*" (OSG p. 46) ¹⁾.

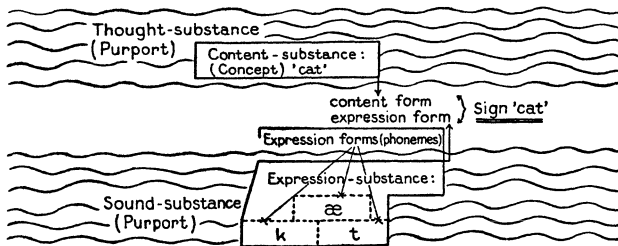
¹⁾ See also *Sprog og Tanke*, 1936, p. 32, quoted on p. 33 by the present writer.

However right it may be that it is only language that forms, that provides the moulds for both thought and human sound, yet it is a question if thought and human sound only come into being with language and do not exist without it. (See p. 151). In this connection it would be better, to my mind, not to speak abstractly of "thought" and "sound", but more concretely of "thoughts" and "sounds": without language we have thoughts for which there is no expression, it is true, but ... *thoughts*, and we can produce sounds that express nothing, it is true, but ... sounds. I presume it is the justification of the introduction of the word 'purport' that it may serve to express that difference. Language does no more than provide the solid moulds to hold the thoughts and the sounds, moulds small and firm enough for us to *handle* them, because otherwise there would be nothing in those transitory things-of-the-moment to hold on to¹⁾. The most Hjelmslev says about this is: "In a science that avoids unnecessary postulates there is no basis for the assumption that content-substance (thought) or expression-substance (sound-chain) precede language in time or hierarchical order, or *vice versa*" (OSG p. 46). In fact — as far as I am able to see it must be vice versa, although, of course, before the existence of language, thought does not exist as linguistic content-substance, nor human sound as linguistic expression-substance²⁾.

¹⁾ Cf. Weisgerber: "die Gegenstände des Geistes ... sind ... offenbar die Stellen, an denen sich Geistiges überhaupt erst bewußt *fassen* läßt" (J. L. Weisgerber, *Das Gesetz der Sprache*, p. 28. Heidelberg, 1951).

²⁾ Also Weisgerber is right in speaking of the "mitgestaltende Kraft" of language, in so far as it helps to develop *thinking*. We can even admit "die in jeder Sprache vorhandenen Satzbaupläne als Formen muttersprachlichen Welterschließung ... Nicht nur, insofern sie in ihren möglichkeiten abhängig sind von den sprachlichen Vorbedingungen der Wortarten und Satzglieder, sondern auch insofern sie der Entfaltung der Gedanken bestimmte Wege weisen. Es leuchtet ein, daß ein Mensch, der nur über die einfachsten Satzbaupläne verfügt, in dem Ausbau seiner Gedanken andere Wege geführt wird als ein anderer, der die verwickelteren Pläne einer Sprache beherrscht" (Op. cit. p. 31). But also Weisgerber is going too far I believe, when he writes "Ganz offenkundig ist diese sprachliche Wirksamkeit in den Bereichen, die der menschliche Geist überhaupt erst in der Geistigen Welt schafft. Dahin gehört vieles aus der Welt des Abstrakten, von dem wir geradezu sagen können, daß es vor seiner Ausprägung im Wortschatz einer Muttersprache überhaupt nicht vorhanden war. Es ist schwer zu sehen, wo und wie ein Gebilde wie *Häufigkeit* oder *Planung* bestanden haben sollte, bevor es in dieser Wortprägung Gestalt und Geltung innerhalb einer Sprachgemeinschaft gewonnen hat. Von ganzen Feldern solcher geistigen "Gegenstände" können wir sagen, daß sie *erst mit den Wortprägungen entstanden* und im Rahmen einer Muttersprache "wirklich geworden sind" (Op. cit. p. 28). The last sentence says two quite different things which, as far as I am able to see, are confused by Weisgerber, just as Hjelmslev would seem to confuse them in the

After what has been said in section 3 of the present chapter on the difference between the forming of the substance of the word unit in the content plane on the one hand and in the expression plane in the other, the reader will understand what is the second correction required, in my opinion, by the above quotation from OSG. It might have been added that of the two minimal units that contract the sign-function the *content-form* is a *simple* form, while the *expression-form* is a *complex* form. I might render the whole matter in another scheme:



5. The 'Inversion of the Sign-Orientation'

I do not know if de Saussure's scheme of the straight lines is to any extent responsible for Hjelmslev's "desire to invert the sign-orientation" (OSG p. 53). It is certainly not the most important factor that has aroused in him this desire. What this desire is chiefly based on, I believe, is his conception of what is designated by the linguistic sign. (See p. 151 ff above). The first thing Hjelmslev says about this is: "It seems to be true that a sign is a sign for something, and that this something in a certain sense lies outside the sign itself. Thus the word *ring* is a sign for that definite thing on my finger, and that thing does not, in a certain (traditional) sense, enter into the sign itself" (OSG p. 52).

passages quoted above. The last part of the sentence is correct; against the first it may be objected, if I am not mistaken, that a new word is only made when, in "knowing" something, we have come to delimit a new item for which we have as yet no word. H. J. Pos mentions the case of Helen Keller as pointing to the same fact, that "we must acknowledge the existence of mental activity anterior to and hence independent of linguistic expression". (*The Foundation of Wordmeanings. Different Approaches*. *Lingua* I, 3, 1948, p. 282). Cf. also: Pos, *Betekenis als wijsgerig fenomeen*. *Alg. Ned. Tijdschr. v. Wijsbeg. en Psych.* 46, 1954, p. 248 – 253. Cf. also p. 67, *Results*: "It can be demonstrated that long before a child is either encoding or decoding linguistically, every bit of its environment is already categorized perceptually. A child could not possibly wait until it had labels for "mother", "hand", etc., before establishing complex significance for them" (Remarks made by Charles E. Osgood).

So far we can agree (See p. 129 above). But because Hjelmslev does not distinguish between '*naming*' and '*symbolizing*' as two distinct functions of the linguistic sign, (See p. 133 above), the result is a confusion, it would seem, of the *content*-substance with the *thing* itself.

Thus Hjelmslev states in the next sentence what he has just been denying: "But that thing on my finger is *an entity of content-substance*, which, through the sign, is ordered to a content-form and is arranged under it together with various other entities of content-substance (we should expect: *expression-substance* BS) (e.g., the sound that comes from my telephone). That a sign is a sign for something means that the content-form of a sign can subsume *that something* as a content-substance" (OSG p. 52/53, *italics mine*).

But "that thing on my finger" cannot be the content-substance of the sign '*ring*', for the content-substance of a sign is — as has been stated over and over again — a 'lump' of *thought*, in this case it is the *thought* of that thing on my finger which "is an entity of content-substance, which through the sign, is ordered to a content-form and is arranged under it". With the aid of this identification of the sign-content with the material world around us, the idea of symmetry between the two planes now receives its full share in the conclusion of the inversability of the sign orientation, at which Hjelmslev arrives by reasoning more or less as follows, I imagine: the sign is a sign *for* something. That something is the content-substance of that same sign. The other side of the sign is its expression-substance. The relation of the sign to its content is the same as the relation of the sign to its expression — so if we express this relation by the term "to be sign for", we must be able to use this term in both directions. Result: "The sign is, then — paradoxical as it may seem — a sign for a content-substance and a sign for an expression-substance" ¹⁾ (OSG p. 53).

And from this standpoint it requires only a short step to arrive

¹⁾ "La glossématique regarde donc le signe comme une solidarité (la fonction sémiologique) entre une 'forme de l'expression' et une 'forme du contenu' qui sont manifestées par — sont le signe de — une 'substance de l'expression' et une 'substance du contenu', tandis que la linguistique a jusqu'ici regardé la 'substance de l'expression' (rarement 'la forme de l'expression') comme le signe de 'la substance du contenu'". (Niels Ege, *Le signe linguistique est arbitraire. Recherches* p. 25).

at the following: "The terms *expression plane* and *content plane*, and, for that matter, *expression* and *content* are chosen in conformity with established notions and are quite arbitrary. Their functional definition *provides no justification for calling one, and not the other, of these entities expression, or one, and not the other content*. They are defined only by their mutual solidarity, and *neither of them can be identified otherwise*. They are each defined only oppositively and relatively, as mutually opposed functives of one and the same function" (OSG p. 55, italics mine) ¹⁾.

And from there it is only one more short step to the final statement of Ch. 14: "... in recent times ... we have been led to require a grammatical method that takes its starting point in the expression and seeks to go from there to the content". (Hjelmslev adds in a footnote: "So, not least, the author of the present work (L. Hjelmslev, *Principes de Grammaire Générale*)"). "After the discovery of commutation in its full extent, it turns out that this requirement is inaccurately formulated. With the same right one might require that the study of *expression start from the content and proceed from the content to the expression*" (OSG p. 68, italics mine).

I believe p. 155-160 has made it sufficiently clear that this would be an impossibility ²⁾.

¹⁾ Togeby says the same: "A ce stade de l'analyse l'expression et le contenu ne sauraient être déterminés autrement que par leur solidarité. On a voulu, en prenant la substance pour base, définir le contenu par le concept, l'expression par le son ... Mais étant donné que le contenu et l'expression permettent une conception et physique et psychique, on pourrait aussi bien invertir les termes" (*Structure immanente de la langue française*, TCLC VI, 1951, p. 25).

²⁾ The idea of the inversion of the sign orientation has been conclusively criticized by Reichling (*Het Woord*, p. 58, 59) and, earlier still, by Bühler. Bühler reproaches de Saussure for leaving room for this idea in his statement that "On peut la (la langue) localiser dans la portion déterminée du circuit où une image auditive vient s'associer à un concept" (*Cours* p. 31). Bühler takes the term "associer", used by de Saussure, in its scientific psychological sense (overlooking, it seems, that de Saussure may not have meant it in that sense, speaking, as he does, in other places of "combinaison" (e.g. *Cours* p. 99) or of the "union" (*Cours* p. 32, e.g.) of the concept with the acoustic image). Bühler then goes on to say: "Bedeutet, in der Assoziationskette des Alphabets z.B. "kraft" inniger Assoziation, die zweifelsfrei besteht, jedes vorausgehende Glied jedes folgende? Bedeutet die Vorstellung α das folgende β oder bedeutet der Gegenstand von α den Gegenstand von β usw.? Wenn nicht, dann ist die angesetzte Identität ein Nonsens und nichts anderes" (*Die Axiomatik der Sprachwissenschaften*, 1933, p. 45).

CHAPTER IX

THE COMMUTATION TEST

Hjelmslev introduces the commutation test as an entirely new invention. There is indeed a difference between his commutation test and the commutation test as the London and Prague schools of Phonology have applied it long before him. But that difference is not so much in the test itself as in two secondary features of it, the first of which is Hjelmslev's extensive *definitions* of even the most simple procedures and principles, each of which, as he realizes very well and actually says of one of them, "has always implicitly played a role in scientific research, although so far as we know, it has not previously been formulated" (OSG p. 63).

The second point of difference between the London and Prague schools' commutation test and the glossematic one is the *extension* of commutation.

1. *The definition of commutation.*

Hjelmslev's *definition of commutation* is: "... a correlation in one plane, which has relation to a correlation in the other plane of language".

This should be understood as follows:

A correlation (the 'either-or function') belongs to the *system*. A correlation in the expression plane is therefore an alternation between two units of the expression system, e.g. *k/b* in [kæt – bæt].

It has a certain relation to a correlation in the content plane: the alternation between the contents 'cat' – 'bat'.

It should be noted that Hjelmslev uses the word 'relation' here in its general sense, not in the sense of OSG p. 36: for the 'both-and function' (which belongs to the *process* (text) ¹⁾).

2. *The extension of commutation to larger units.*

It has already been touched upon several times that Hjelmslev

¹⁾ See p. 172 fn. 2, however.

believes this commutation test to be necessary to find not only the expression *elements* (phonemes) and the content *elements* of a language, but also the larger units: "the principle holds true ... for all entities of expression, regardless of their extension, and not only for the minimal entities, and it is true for the content plane just as much as for the expression plane. Actually this is the only logical consequence of recognizing the principle for the figurae of the expression" (OSG p. 59). "If the exchange of one sentence-expression for another can entail a corresponding exchange between two different sentence-contents there are two different sentences in the expression; if not, there are two different specimens of one and the same sentence-expression. The same is true for word-expressions and for any other sign-expressions". (OSG p. 60) ¹).

But — even as a purely theoretical procedure the idea of commutation for any units larger than words is a doubtful point: the commutation test is in fact only applied to *words*, also by Hjelmslev; the commutation test between sentences etc. would on inspection appear to be nothing else but a commutation test between words. Even in theory we do not 'find' words by a mutation of one 'sentence-expression' as a whole against another and thus find out if this mutation causes a similar mutation in the 'sentence-content' as a whole, in order to conclude thus that one 'element' of the first sentence: one word, must be functionally different from the other word which is substituted for it in the second sentence. Where would be the end of this? The problem would remain the same and would only be pushed farther out of the reach of solution: for how do we recognize two sentence-contents as being different — or, for that matter, how do we know the meaning of a 'sentence-unit' at all, if not by the meaning of the words it has been constructed of?

¹) Uldall goes even further. It is not clear whether he intends to practise theoretical commutation from the very beginning: actually we should begin at the 'partition' of nothing smaller but the universe, because "the description of a particular object is ... only part of the description of the whole universe ... To be absolutely sure of the description of, say, an English text, one would therefore have to begin with an analysis of the universe in the first operation of the procedure and descend gradually until the text, or some slightly larger unit comprising it, is reached". Uldall realizes that "... in practice that is clearly impossible". He also realizes that "the investigator is forced to select his object by common sense or by "scientific intuition", which makes his description tentative and of uncertain ultimate validity". (*Outline* p. 30).

Against the commutation between units larger than sentences, and thus against the partition of the text into sentences, there is even a glossematic argumentation to be made, as Garvin points out on p. 85 of his article: "... the sentences in a text are in a relationship of ... constellation only: none of them presupposes the other, since each is potentially a self-contained unit". He could have added even more weight to this observation if he had quoted OSG p. 75, where Hjelmslev says: "... the aim of science is always to register cohesions ¹⁾, and *if an object only presents the possibility of registering constellations or absences of function, exact treatment is no longer possible*". In such cases "*a continued scientific analysis becomes fruitless*" (italics mine).

The largest units between which cohesion can be registered seem to be the categories of head- and subclause. It is at the sentence, therefore, at the sentence of *spoken* language, that linguistic analysis begins ²⁾, basing itself on the *words* the sentence is formed of: "the sentence is distinguished by (characterized by) the sentence-melody, but necessarily presupposes words"; "the sentence is ... the word or complex of words used, characterized by the sentence-melody" ³⁾.

3. *Second extension: the 'exchange' of units starting from the content.*

I believe it has been sufficiently stressed in Ch. VIII that an analysis, also a commutation test, starting from the content is not feasible. That nevertheless Hjelmslev holds it possible is a consequence of his particular conception of the 'content' as including the actual things, the world around us. Indeed: if I first take up a cup and name it, and then a saucer and name it, as is sometimes done in elementary language-teaching, I have "exchanged" one "content-unit" with another and discovered that this "exchange" "caused" a corresponding exchange in the expression. But how do we exchange two concepts if the real things are not present to "handle" them? Such a procedure would be uncertain and absolutely uncontrollable. Hjelmslev does not give any indication how we must carry it out, he only says that we must do it: "Commutation ... consiste à reconnaître autant de

¹⁾ See p. 74 for terminology.

²⁾ Cf. Garvin, *Review OSG* p. 84.

³⁾ Reichling, *ENSIE* II p. 38, translation mine.

valeurs qu'il y a des quantités sémantiques qui *en se substituant l'une à l'autre* peuvent entraîner un changement de l'expression" ¹⁾. As an example is given that if in Greek we replace the "idea" 'two' by the idea 'plusieurs' this causes a change in the noun-expression, if we do the same in French there is no change in the expression; consequently Greek has a 'dualis', French has not. And "*c'est la même épreuve* qui nous oblige à reconnaître trois genres dans le nom allemand, deux dans le nom français et aucun dans le nom anglais" ²⁾. I should like to know *what idea* it is, then, that requires "*das Tor*" and "*der Tür*"? Another example of this method of exchanging "ideas" is to be found in an earlier paper: "Umgekehrt sind in einer beliebigen Sprache die Inhaltseinheiten dadurch definiert, dass durch ihren Umtausch ein Ausdrucksunterschied hervorgerufen werden kann. Will man z.B. untersuchen ob in einer gegebenen Sprache die beiden tatsächlich vorhandenen Begriffe 'Konjunktiv' und 'Infinitiv' zwei verschiedenen Inhaltseinheiten vertreten oder nicht, muss untersucht werden, ob der Umtausch der beiden Begriffe einen Ausdrucksunterschied hervorrufen kann oder nicht" ³⁾. Again I should like to ask how we could exchange these two notions unless by their *expressions*, the word being the only means to *handle* a concept ⁴⁾?

4. *Paradigms.*

The glossematic paradigm has a meaning different from the traditional one. Hjelmslev even speaks of "paradigms" of the content, for instance when he describes commutation as "a correlation and an exchange within a paradigm that have relation to a corresponding correlation and to a corresponding exchange *within a paradigm* in the other plane of a language ..." (OSG p. 66, italics mine).

But what is a paradigm in the content? Even if Hjelmslev's notion of 'paradigm' is accepted this question cannot be answered. By a paradigm Hjelmslev understands "a class within a linguistic system" (OSG p. 28). And a class is no more than "the object that is subjected to a division". This shows that paradigms are found

¹⁾ *Struct. Morph.* p. 70.

²⁾ L. Hjelmslev, *Struct. Morph.* p. 70 (Italics mine).

³⁾ L. Hjelmslev, *Neue Wege der Experimentalphonetik*, p. 154. (Italics mine).

⁴⁾ Cf. L. Bloomfield, *Language*, 1933, p. 139 ff.

in the *analytical* way: by dividing and subdividing the text, regarding it, as Hjelmslev says on p. 13 OSG: "as a class divided into segments, then these segments as classes divided into segments and so on ...".

Yet on p. 34 OSG it says that of the two examples 'pet' — 'man' ... *p* and *m* together, *t* and *n* together *produce paradigms* ...' (Italics mine). This seems to represent paradigms as *synthetically* found units. It appears that Hjelmslev puts into one paradigm in the expression all the elements that can occupy the same *place* in the text. As he said at one of the meetings of the Copenhagen Linguistic Circle: "Glossematic analysis is carried out in this way that one finds a relation between, e.g., two parts, and then one fills in all that can stand in those two places and thus one arrives at the establishment of paradigms"¹). This accounts for Hjelmslev's statement that commutation consists of an exchange *within a paradigm* etc. (Cf. Borgström, *acta Ling.* V, 1, p. 8).

But whereas it was possible to follow Hjelmslev in his establishment of paradigms in the expression plane, it is not clear how he arrives at his paradigms in the plane of the content. All he says about these is (OSG p. 48): "A paradigm in one language and a corresponding paradigm in another language can be said to cover one and the same zone of purport, which, abstracted from those languages, is an unanalyzed, amorphous continuum, on which boundaries are laid by the formative action of the languages. Behind the paradigms that are furnished in the various languages by the designations of color, we can, by subtracting the differences, disclose such an amorphous continuum, the color spectrum, on which each language arbitrarily sets its boundaries".

Once more this shows that Hjelmslev includes into the content purport, besides the "*thought*", the *things themselves*, in casu the colour spectrum.

But the way he obtains a "paradigm" in the content is less clear than that in which he obtained his paradigms in the expression.

¹) Eli Fischer-Jørgensen, *Referat af møder i det glossematiske udvalg* 1950, (stencilled), p. 18. Translation mine. Kindly put at my disposal by the writer. See for a similar definition of "paradigm" the same author in *Remarques sur les principes de l'analyse phonémique*, *Recherches*, p. 216, footnotes; "Un paradigme ... est constitué par ses possibilités de relations syntagmatiques avec d'autres classes du même système. (Voyelles et consonnes, consonnes initiales et finales etc., constituent des paradigmes différents). Cette formule correspond donc à peu près à ce qu'on désigne d'une manière plus vague comme des éléments qui se trouvent 'dans la même position'".

Failing any indication as to the relational place of the elements of content (thought) in the content-system, Hjelmslev has recourse to the more distant level of the content: the things themselves, to find which elements (concepts) could be considered as forming a "paradigm of the content". He takes the colour spectrum. Another "paradigm of the content" could perhaps be "buildings" and another "means of conveyance" and so on.

But ... are these still to be called *linguistic* paradigms? And what about the "paradigm of content" 'cat-sat'? For Hjelmslev says: " ... just as we can imagine a correlation and an exchange within a paradigm" (I chose *k*-s in 'cat-sat') "that have relation to a corresponding correlation and to a corresponding exchange *within a paradigm* in the other plane of a language ...".

I believe this proves from quite another point of view what was insisted on at length in Ch. VIII, that an analysis of the content is arbitrary and stops being linguistic as soon as it leaves its only firm foothold: *the expression*.

5. *Identification of phonemes — Its place in the analysis.*

It is clear that the identification of the phonemes of a language is quite a different matter according to whether we mean the original identification at the stage when we are analyzing the language "by trial and error" or the second "identification" which is the same as what I called in the Introduction "finding^e" and which consists in confronting the system of that language with the theoretically constructed general system to find out which dependences of that general system are "realized" in the particular language under investigation.

The latter "identification" is described, though not for phonemes but for clauses, in OSG p. 77: "Let us imagine that selection is chosen as the basis of analysis. Then in the first operation the given chain is divided into first-degree selection-units; the category that is obtained from all these units we call the *functional category*. By this, then, is understood the category of the functives that are registered in a single analysis with a given function taken as the basis of analysis. Within such a functional category four kinds of functives may be imagined:

1. functives that can appear only as selected;

2. functives that can appear only as selecting;
3. functives that can appear both as selected and as selecting;
4. functives that can appear neither as selected nor as selecting

(i.e., functives that contract only solidarities and/or combinations, or that do not contract relation at all). Each of these four categories we shall call a *functival category*, thus, by functival categories we mean the categories that are registered by articulation of a functional category according to functival possibilities. The operation of the analysis consists in investigating which of these four a priori possible functival categories are realized and which are virtual¹⁾ — by dividing each of the functival categories into members on the basis of the commutation test; ... Let us again imagine as a concrete example a partition of the chain into primary clauses and secondary clauses. The primary clauses will belong to functival category 1, the secondary clauses to functival category 2. For the sake of simplification let us imagine that functival categories 3 and 4 both prove to be virtual. Now it is clear that this registration cannot mean that each particular secondary clause selects each particular primary clause: a particular secondary clause does not require the presence of a certain primary clause, but only of some primary clause or another. Thus it is the category of primary clauses that is selected by the category of secondary clauses; the selection exists between the functival categories²⁾, while the relation that exists as a consequence thereof between a member of one functival category and a member of the other may well be different — a combination, for example. It is part of the task of linguistics to set up a general calculus for the relations between elements that correspond to given relations between functival categories". This means that it is also the task of linguistics to calculate which particular headclauses could be combined with a certain particular subclause and vice versa.

It is clear that this analysis makes no problem of the identification of the elements; it presupposes this identification. In casu: it presupposes that we recognize a headclause as a headclause and a subclause as a subclause, or we could never register them. In the

¹⁾ See p. 86, of the present.

²⁾ OSG p. 77; From this point of view the terms *relation*, *selection*, etc. seem to belong to the *system*; thus there would be no need for separate "correlational" terms (p. 74). See p. 181 below.

case of phonemes: if a registration is required of selections we can only conclude that in a certain case we have a selection by comparing one of the phonemes of the 'chain' concerned with other 'chains' to find out if the phoneme can occur without the other, which implies an identification of the phoneme in other surroundings. Therefore, all Hjelmslev says about identification in this analysis is merely that we recognize the units: "If we imagine a text divided into sentences, these into clauses, these into words, etc., and an inventory taken for each division, we shall always be able to observe that in many places in the text we have "one and the same" sentence, "one and the same" clause, "one and the same" word, etc.: many specimens of each sentence, each clause, each word, etc. can be said to occur". (OSG p. 56, *italics mine*). Identification is presupposed.

Consequently, when Hjelmslev says on p. 77 OSG that we investigate "which of the ... a priori possible functival categories are realized ... by *dividing* each of the functival categories into members *on the basis of the commutation test*", this is, as far as I can see, a superfluous addition, because in order to recognize some part of a text as a *realization* of a certain functival category we must first have identified it as "that particular part" which stands to another" particular part" in such a relation as makes up the functional category we are looking for ¹⁾. In order to recognize a certain part, for instance, as a selected part, we must *identify* it every time it occurs so as to make sure that it *is* "selected". For a category is something obtained synthetically, it is, as Hjelmslev says, a *sum*, and a functional category is "*obtained from all* these (i.e. first-degree selection) units". That means: *first* comes the recognition of the units, *then* the uniting of them into a category.

Of course we can only make an inventory of the various functives which enter into a certain function when we have first distinguished them as different by the commutation test, but it would seem that the commutation test takes place *before* the division of the text into "classes divided into segments, then these segments ... into segments, and so on ..." (OSG p. 33).

This is especially clear in the field of the smallest units of

¹⁾ Cf. Jakobson: "Identification and differentiation are but two sides of one and the same problem" (*Results*, p. 20).

expression, the phonemes. In so far as the commutation test actually precedes the analysis into "dependences", therefore, we can follow Hjelmslev when he says that "each of the functival categories is divided into members *on the basis of the commutation test*", although the word "divided" seems to be out of place here and does not describe what Hjelmslev intends to be done. It seems to be as much out of place as the presumption, on p. 56 OSG, that in a registration of functives with a given function as basis of division we should first register, and mechanically, only *variants* of phonemes and that afterwards "we must be able to *infer from variants to invariants*" (which procedure is called "reduction"). As was said already: in order to recognize a certain element as a functive of some particular function we must be able to recognize it in *more than one place* in the chain, which implies identification of its two or more variants *as variants* of one and the same element. If we find, e.g., the groups [hai] and [ai], how should we know that it is the realization of a selection and that *h* is the selecting unit if we could not ascertain at the same time from the rest of the text that *the same* [ai] occurs alone but that *h* *wherever it occurs* presupposes other units?

Indeed: "pour mener l'analyse à bout il faut faire des identifications entre les différents "microphonèmes", il faut les réduire à être des variantes conditionnées d'une même invariante. Pour faire cette réduction, on ne peut pas en principe se servir de l'épreuve de commutation, parce que ces quantités n'ont ni commutation ni substitution¹⁾. Il faut d'autres critères. Et le critère principal employé par presque toutes les écoles phonémiques est celui de la parenté phonique". (Eli Fischer-Jørgensen, *Remarques sur les principes de l'analyse phonémique. Recherches* 1949, p. 220).

6. "Place" of the commutation test.

On account of the above it seems that we have to "place" the commutation test chronologically not only before the inventORIZATION at each successive stage of the analysis, but before the whole of Hjelmslev's analysis (analysis no. 2), that is, before the division of the "unanalyzed" text into "classes and these into segments". Very often it seems as if this is the order in which

¹⁾ For the term *substitution* see p. 192 note 1.

Hjelmslev imagines the various procedures to take place, very often also it is not clear at all which order is meant nor if any definite order is thought of at all. Thus it would seem at times as if there are two different commutation tests: one at the beginning of all linguistic analysis (in this connection it is remarkable that glossematicians sometimes speak of “experimental commutation”; this one would begin at *words*. The other one would be the “theoretical commutation test”, the truly glossematic one, starting at the largest units such as periods, sentences, etc. Yet all glossematic theory seems to recognize only one commutation test, though applied “on all levels”. But the glossematic description of this test makes it extremely difficult to “place” it in the whole procedure of analysis. In fact there are three places where it can be put:

Firstly, there is the commutation test “by trial and error” (“experimental commutation”), which we perform unconsciously when learning the language. This follows logically from the glossematic requirement to accomplish the formal analysis *before* describing the substantial manifestation of the formal units. This “would be impossible” — as Eli Fischer-Jørgensen rightly observes — “if one did not know the language beforehand, which means that roughly and implicitly one already has made the commutations, since the relations between expression and content are known”. (*Washington Lecture on Glossematics*, 1952, p. 5).

Secondly, we may imagine the glossematic analysis as starting with another commutation test, the theoretical one as described above, which would include, e.g., a commutation between sentences and even larger units. Against this “place” of the commutation test there is this objection that it is hard to see how it could yield us any other units than the ones established by us when we learned the language: even though this commutation test would not be made “roughly and implicitly” like the first, when deciding whether a certain change in the expression causes a change of meaning we should base our conclusions entirely on our knowledge of the language acquired previously “by trial and error”.

The glossematic description of the commutation test as starting at the largest units leaves as a third possibility to place it as part of the final control, of “glossematic analysis proper” (see p. 27).

But in that case it would be a commutation test between only functionally described units, an entirely superfluous operation as those very same functions have first been established by commutation.

It is perhaps possible to find a solution in the distinction made by glossematicians between the commutation test and commutation. The latter is a function, the expression "there is commutation between two invariants" refers to the paradigmatic function between the two invariants. In the final control we should then have to think of commutation as a function ¹⁾ established (found^b, see p. 23) beforehand between the units found^a by the commutation test. But this solution is ruled out by Hjelmslev's recent statement that "la commutation, qui est pour l'analyse immédiate ... une corrélation, ... et, d'une façon plus générale, les corrélations entre variantes qui, à n'importe quel stade de l'analyse de chaque plan, permettent l'identification ... des éléments, *constituent le domaine propre dans lequel le concours de la substance ... s'impose*" ²⁾. It appears from this statement that with the commutation test we have to think either of the first or of the second "place". And thus several questions remain:

- a) Have we to reckon with one or with two commutation tests?
- b) If we have to reckon with one commutation test, does not it actually lie outside glossematic analysis proper?
- c) If we have to reckon with two commutation tests, what is the use of the second one and in what respect would the units it "yielded" differ from those "yielded" by the first, made "roughly and implicitly", or "by trial and error"?

7. *Permutation. Definition of the word*

The mutation (shift) between two parts within the same chain which causes a corresponding shift in the opposite plane, Hjelmslev calls *permutation*. He gives no examples of it, but of course this kind of exchange "is frequently found between signs of relatively large extension" (OSG p. 66), e.g.: 'you saw the child — the child saw you'.

¹⁾ Miss Fischer-Jørgensen drew my attention to this difference.

²⁾ *Stratification du Langage*, Linguistics to-day 1954, quotation from the m.s. which quotation was kindly put at my disposal by Miss Fischer-Jørgensen before publication. It has appeared now in Word 10, 2-3, 1954, p. 163-189.

And in this connection Hjelmslev incidentally gives a very remarkable definition of the *word*: "... it is even possible to define *words* as the *minimal signs* whose expressions, and likewise whose contents, are *permutable*" (OSG p. 66, italics mine).

This definition is remarkable because it seems to contradict so much of what Hjelmslev stated about words in previous chapters. For: if a word is a minimal permutable sign this means, what was insisted on at length in Ch. VII, 2:

1. that the word as such is an isolatable unit;
2. that it has a meaning of its own, independent of the context.

Hjelmslev must have realized this. His definition cannot mean, as Togeby thinks: "qu'un changement de l'ordre des mots pourra entraîner un changement de sens, tandis qu'un changement de l'ordre des parties du mots n'en sera pas capable" (*Qu'est-ce qu'un mot? Recherches*, 1949, p. 107). For a change of the order of the parts of a word can certainly bring about a change of meaning: 'pat'-'tap', [iŋkliŋ] - [kliŋiŋ]. And it is not at all "la même définition" (Togeby, loc. cit.) when Wells says: "Whether or not two orders of the same words have different meanings, *they serve to emphasize words as shiftable units*" (quotation by Togeby, loc. cit.). To my mind this is what Hjelmslev's definition of the word does, too. It means simply what Reichling has explained at length, that words are the minimal signs which can be put in different places in the chain and yet preserve their character of units of a definite permanent expression and a definite permanent content. This is to be gathered from Hjelmslev's words that there is a *corresponding* shift in the opposite plane, not just a shift. It seems as if, after all, Hjelmslev has arrived here at the recognition of the autonomy of the word ¹⁾.

8. Categories.

It may not be quite clear what exactly is the difference between Hjelmslev's notion of 'paradigm' and that of 'category', the two words are used in almost the same sense. In 1936 a category is

¹⁾ Cf. E. M. Uhlenbeck's statement: "Every language has words, i.e. signs having a phonematic structure and capable of being used as a sentence in combination with an element of intonation". (*The Structure of the Javanese Morpheme*", *Lingua* II, 3, 1950, p. 247). Cf. de Groot, *Structurele Syntaxis* p. 26 ff.; Viggo Brøndal, *Ord-klasserne*.

defined as “un paradigme fonctionnel” ¹⁾. It need not be said again that both paradigm and category are exclusively defined by criteria of *place*: “Tout glossème est défini par le fait d’appartenir à une *catégorie* donnée, c. à. d. par sa place dans le système” (ibid.). But it should always be borne in mind that the place of a unit in the system is entirely determined by the relations it contracts in the text, in the process. In other words, the place in the system depends on the (possible) places in the process “le système de la langue est établi par l’ensemble des corrélations et des catégories constitués par elles, et les catégories à leur tour se définissent syntagmatiquement” (*La notion de rection*, p. 22) Thus, in OSG a category is defined as a “paradigm that has correlation to one more other paradigms within the same rank” (Def. 75); and, although a paradigm is defined as a “class within a semiotic system” (Def. 54), we saw above that a paradigm was constituted by all the units that could have the same position in the *text*. The following quotations may serve to illustrate the glossematic concept of ‘category’:

“La catégorie est un paradigme muni d’une fonction définie, reconnue la plupart du temps par un fait de rection ... Si les prépositions constituent une catégorie particulière au sein du système, c’est qu’elles constituent un paradigme défini par la faculté de ses membres de régir des cas” ²⁾. Again: “La catégorie des cas peut se définir comme un paradigme dont certains membres subissent la rection de prépositions et de verbes”. (ibid.). Again in the same year: “La catégorie, classe fondamentale de la paradigmatic, est définie par la faculté de ses membres d’entrer en des relations spécifiques” ³⁾. [Also in OSG ‘paradigmatic’ is used for the semiotic system, the language — in contrast to ‘syntagmatic’ which is used for the semiotic process, the text (p. 36)].

Then there is the word ‘sum’, which is a more general term: a ‘sum’ is a “class that has function to one or more other classes within the same rank” (OSG Def. 45) (a rank being constituted of the derivatives of the same degree belonging to one and the same process or to one and the same system, Def. 43). Also ‘class’ is a

¹⁾ L. Hjelmslev, *Essai ... Morphèmes* p. 141.

²⁾ L. Hjelmslev, *La notion de rection* p. 14.

³⁾ L. Hjelmslev, *Struct. morph.* p. 80.

general term, applying to both system and process, defined as it is as an "object that is subjected to a deviation". Thus of the four terms '*class*, *sum*, *paradigm* and *category*', '*class*' is the most general a '*sum*' is a special kind of class; then follows '*paradigm*', which is a class or a sum within a semiotic *system*, and then comes '*category*', which is, as we saw, a special kind of paradigm. But then there is still the term '*entity*', which, OSG tells us, is also a '*sum*': "functions always are present either between sums or between functions; in other words, *every entity is a sum*." (OSG p. 76, italics mine). For *a paradigm and in fact every entity, may always be considered as the sum of its variants*.

So we have to consider every entity as two or more entities with mutual function, which result, according to Hjelmslev, "is suitable for further underlining the fact that only the functions have scientific existence" (OSG p. 76). From this we can conclude that in point of fact every paradigm is also a category, for every paradigm is an entity in Hjelmslev's sense, a paradigm also consists of "two or more entities with mutual function". This gives us five different terms which are difficult to keep apart: *entity*, *class*, *sum*, *paradigm*, *category*.

In spite of this embarrassing diversity of terms we would do less than justice to Hjelmslev if we failed to see that there is a very great truth concealed behind all this. A truth which so far has never been pointed out and which I believe will prove more and more to be of essential significance for any further development of linguistic analysis.

"In practice it is important in the analysis to understand that *relation is present between categories only*" (OSG p. 77).

Hjelmslev rightly signalizes this as the main difference between traditional syntax and glossematics. That the word '*only*' in the quotation must be too absolute appears from p. 78: "... the selection exists between the functival categories, while *the relation that exists as a consequence thereof between a member of one functival category and a member of the other may well be different — a combination, for example*". (Italics mine). What Hjelmslev actually means to say in the sentence quoted from p. 77 OSG (above) is, that glossematics is *only interested in relations between categories*. In fact, this is how it was put by him at

one of the meetings in the Copenhagen linguistic circle: "Traditional syntax" is interested in relations between variants (to be understood as 'members of paradigms', BS) irrespective of what invariants these variants belong to — viz. parataxis, hypotaxis and predication —, whereas glossematics is interested in relations between invariants, *and in relations between variants only* for as much as it tries at the same time to 'place' these variants under invariants. The 'parts' of traditional syntax (subject etc.) are classes whose members are 'grouped' in these classes irrespective of the fact which is decisive for glossematics, that at the same time they can be grouped as variants into invariants defined by commutation" ¹⁾).

An illustrative example in sentence-analysis is, e.g., the difference between glossematic "selection" and syntactic "subordination" (hypotaxis). In both we have to do with groups of two entities of which one presupposes the presence of the other. *Selection*, however, is a relation between *classes* (paradigms) or categories, (see above p. 179) and between invariants. One concludes that there is selection by comparing with *other chains* and finding out if one of the entities *can* occur without the other. *Subordination*, on the contrary, is a relation within *a certain chain*, it is a relation between *variants*. It is immaterial that other variants of the same entity can stand in other relations in other chains or can occur alone. For example in "*les philosophes grecs*" and "*les Grecs philosophes*" there is no doubt, from the point of view of subordination, that the first word is headword, the other subordinate, this being defined by the meaning, so by the *substance*. Syntactically, therefore, these are two cases of *subordination*. It is of no importance that the words can change places and that either can stand alone. From the point of view of glossematic relations, on the other hand, this is very important: there is no selection but *combination* (two variables, see p. 74). "Traditional syntactic analysis" does not, like glossematic analysis, aim at

¹⁾ For the expositions about the difference between syntax and glossematics I am greatly indebted to Miss Eli Fischer-Jørgensen for her kindness in lending me her Reports of meetings of the glossematic committee of the Copenhagen Linguistic Circle. The present subjects were discussed in the committee on 28/11/'50, the quotation is from remarks made by Hjelmslev, p. 19 of the Reports of the meeting of 1950. (Translation mine). The examples are from the same source.

grouping the entities that can enter into a chain after their *possibilities of combination*.

Here Hjelmslev puts his finger on the weak spot of many of even the most modern grammars, and he does more: he indicates the way to be taken by the syntax of the future.

The only difficulty presented by the above exposition concerns glossematic relations themselves: if selection is established by a comparison *with other chains*, can we still say it is a relation *in the text*, a *syntagmatic* relation? If selection exists between *categories* (paradigms) only (cf. p. 172 above), has it not been transferred from the *process* we actually have before us into the *system*, has it not become a *paradigmatic* relation? And if so, what is the use of the separate set of "correlational" terms introduced by Hjelmslev (cf. p. 74)? In view of this difficulty it is remarkable that this third set of terms is hardly ever used in glossematic writings.

With this the discussion of glossematic commutation is by no means exhausted. Nothing has been said as yet about the three important principles which Hjelmslev lays down to establish the invariants: the principle of economy, the principle of reduction, and the principle of generalization.

These principles are typical of glossematic analysis; especially the last. Its consequences appear particularly clearly in the way glossematians reduce the inventory of phonemes of a language. The principles will be discussed in Chapter XI, where the ultimate results of the deduction will be examined.

CHAPTER X

SYNCRETISM AND CATALYSIS

1. *Syncretism*.

The traditional meaning of the term 'syncretism' is, according to Marouzeau: "le phénomène par lequel une forme se trouve appelée à cumuler plusieurs fonctions" (*Lexique de la terminologie linguistique*, 1943, p. 205). For instance the Latin ablative which has taken over the functions of the instrumental and the locative.

This is, therefore, what we expect to find when Hjelmslev says that he will consider the phenomenon "which in conventional grammar is known as *syncretism*" (OSG p. 78). But as Hjelmslev does not use the term 'syncretism' in this traditional sense, what we find is something different. It is better described by the other term he uses: the 'neutralization' of modern phonemics, which, in the field of phonemics, results in Trubetzkoy's and Martinet's 'archiphoneme' ¹⁾. In glossematics, however, 'neutralization' concerns the oppositions of entities of any extent, not only the oppositions between phonemes.

Instead of the 'neutralization' of oppositions Hjelmslev used the term 'suppression' in earlier works (Cf. *Les oppositions supprimables*). In OSG it is indicated by the term 'suspension', while for the suspended opposition itself 'overlapping' is used. *Suspension*, then, is the event, that which happens to the opposition, *overlapping* is the suspended opposition itself, the function (in the sense of relation). And *syncretism*, finally, is "the category that is established by an overlapping"; for instance, Hjelmslev speaks of "the syncretism *p/b* is pronounced ..." (OSG p. 80). Thus with Hjelmslev's 'syncretism' we have not to do with the traditional idea of a "cumulation of functions on one term" (Marouzeau), his syncretism is not a realization of either the one or the other of the two overlapping terms; Hjelmslev's 'syncretism' is a *new* entity, a "Mittelding" as

¹⁾ Trubetzkoy, *Grundzüge der Phonologie*, TCLP VII, 1939, p. 71.
A. Martinet, *Phonology as Functional Phonetics*, 1949, p. 5.

Trubetzkoy would call it (*Grundzüge* p. 72): "... when two entities under certain conditions are registered as invariants on the basis of the commutation test, and under other conditions contract overlapping, then under these other conditions they will be variants while *only their syncretism* will be an invariant" (OSG p. 79, italics mine).

Hjelmslev speaks of syncretism in both planes (OSG p. 79): in the case of a syncretism between 'signs' (in the glossematic sense), there is at the same time a syncretism in the content plane: "the syncretism of nominative and accusative has the meaning 'nominative-accusative'" (OSG p. 80)¹.

Further down Hjelmslev seems to use *syncretism* in the sense of *overlapping* (the *function*), when he speaks of the *functives* that enter into the syncretism. I will use *syncretism* in Hjelmslev's sense, so for the *category*; and *neutralization* for the event (Hjelmslev's *suspension*).

Hjelmslev gives a formal definition of the conditioning factor of a neutralization: "The entity whose presence is *a necessary condition* for the overlapping between nominative and accusative is the variety of neuter *that is solidary with* nominative-accusative; and the entity whose presence is *a necessary condition* for the overlapping between *p* and *b*, is the variety of central part of a syllable *that is solidary with* a following *p/b*" (OSG p. 79, italics mine). To me this sounds like two tautologies: when a certain entity is *solidary* with a certain other entity this means exactly that its presence is *a necessary condition* for the presence of the other entity (Cf. the survey of terms on p. 74).

The discussion of syncretism will first be illustrated with examples from the expression only, after which the idea of syncretism in the content will be considered separately.

Although the syncretism is a new entity as to *form*, its substantial manifestation may be identical with that of one or more of the functives that enter into it. Hjelmslev distinguishes two

¹) Hjelmslev uses the term 'meaning' here in quite a different sense than when he dealt with the sign (p. 40 ff. OSG). And, if I understand p. 66 OSG right, there is no meaning at all to be attached to 'nominative' or 'accusative' in *templum*, they are to be considered as variants (*bound variants*) of one and the same noun, which means, as far as I can see, that their *content* is the same. What, then, are we to understand by "*the meaning 'nominative-accusative'*"?

Cf. also Garvin, *Review OSG* p. 81.

different kinds of *manifestation* of a syncretism: *coalescences* and *implications*.

A *coalescence* is "a manifestation ... which, from the point of view of the substance-hierarchy, is identical with the manifestation of all or none of the functives that enter into the syncretism". An *implication* is "a manifestation ... which, from the point of view of the substance-hierarchy, is identical with the manifestation of one or more of the functives that enter into the syncretism but not with all" (OSG p. 80, 81). Examples: of coalescence: *o, u > ə* in 'Gladstone', 'pressure' etc. Of implication: Dutch *b/p > ɸ* at the end of a word before a pause.

There is one part of the above quotations which is of extraordinary significance. I mean the phrase: "*from the point of view of the substance-hierarchy*". Indeed — what is investigated when we study a phenomenon such as neutralization is the *substance*, the substance *only*. Neutralization is a typical substance phenomenon (See Ch. VI) ¹⁾. No wonder, therefore, that phonologists, who at all times have been interested in the *substance* of linguistic expression ²⁾, have paid so much attention to it.

As early as 1936 Trubetzkoy published a detailed study of the phenomenon. In it he signalized already the three possible "syncretisms" mentioned by Hjelmslev as different *manifestations* in 1943: that "in the position of neutralization phonetically *one or the other* member of the contrast may occur, or *both* (in different positions) or that there may be an *intermediate* sound". The paper stresses the importance of neutralization to such a degree as to make it the only ground on which a *phonological* opposition can be established: "... c'est la suppression seule qui permet d'établir une opposition "phonologique" selon un principe objectif et sans tenir compte de faits extra-linguistiques" (TCLP VI, 1936, p. 43). Martinet has the same when he says that for an ordinary corre-

¹⁾ "Etant donnée la structure de l'appareil phonique, il n'est pas étonnant que des accommodations des mouvements automatisés les uns aux autres viennent contrarier la simplicité des combinaisons ... De là aussi des faits de neutralisation ..." (J. Fourquet, *Analyse linguistique et analyse phonologique*, TCLC V 1949, p. 43). Cf. also Eli Fischer-Jørgensen, *Phonemics*, Archiv f. Vergl. Phonetik, V, 1951, p. 170-200, esp. p. 10 of the translated reprint.

²⁾ "*Phonology as Functional Phonetics*" is an eloquent title (See p. 182). Cf. *Projet de Terminologie 1931*: "Phonemics — Part of linguistics treating *sound-phenomena* from the standpoint of their function in language (TCLP IV, 1931, p. 309. Italics mine).

lation "l'apparement est d'ordre *phonique*, tandis que dans le cas de la "neutralisation" il est d'ordre fonctionnel" (TCLP VI, p. 49, 52).

In his *Grundzüge* Trubetzkoy gives evidence of a different opinion on the point of truly phonological oppositions, but the two quotations given just now are also quoted with approval by Hjelmslev in his *Note sur les oppositions supprimables*, which also appeared in the TCLP (VIII, 1939, p. 51-58). He says that these conclusions of Trubetzkoy and Martinet are of immense significance for phonology, because this science will now come to realize that one should not use the *inductive* method, going from the substance to the form, but inversely: "Le caractère *linguistique* des faits phoniques (y compris les faits phonologiques) ne se laisse définir qu'à la base d'un examen des fonctions" (p. 54). Further (what was quoted before by the present writer in another connection): "Mais on ne saurait plus parler ni de suppression ni de neutralisation. Ces termes présupposent l'opposition, mais l'opposition ne préexiste pas à la suppression, ... au contraire, elle est constituée par la suppression même. Le fait primaire est la *superposition* de deux formes différentes; la superposition se manifeste en une fusion; elle a pour effet de provoquer une polarité entre les termes qui se superposent l'un à l'autre" (p. 57).

Hjelmslev concludes this article by stating that this is a point of extraordinary agreement between Trubetzkoy's phonological theory and Hjelmslev's own. And in one respect it appears he is right. When we look at the phenomenon of neutralization more closely and compare the glossematic and the phonological approach to it we cannot even find any difference: to find the cases of neutralization both glossematics and phonology go to the *substance*. Hjelmslev rightly defines the different kinds of syncretism "from the point of view of the *substance*-hierarchy" (see quotation above, p. 184). This is the only point of view from which they can be defined. It is the only point of view from which we can discover a case of neutralization.

Yet, even so — how do we actually discover a case of neutralization? Let us try to follow Hjelmslev's definition according to which neutralization "consists in the fact that the commutation between two invariants may be suspended under given con-

ditions" (OSG p. 78). Let us suppose that we have found as invariants for Dutch the entities p, a, h, t, d, n . Commutation between t, p , and n is possible in final position: $pat - pap - pan$. But in the same position no commutation is possible between $t-h, t-d, p-h, p-d, n-h, n-d$. Does this mean that those six sets are all cases of neutralization, that they are all "overlappings", to speak in Hjelmslev's terms? A "syncretism" might be assumed, for $t-d$ and for the sets with h , perhaps, because phonetically they have something in common. But for $p-d$, and for $n-d$ and for $p-n$? In other words: *When* do we say that a commutation is *suspended*? If we compare Dutch *kat* and *pad*, pronounced $[kat]$ and $[pat]$, *why* do we have to reckon with a t -phoneme pure and simple in the first case but with a syncretism (archiphonème) T out of $t + d$ in the other? How do we know?

Why must we in the case of Dutch *kat-katten, pad-paden*, $[pat:den]$ explain one of the t -phonemes, the one in $[pat]$ as a $d-t$ syncretism? Because there is never a d in that position? But there is never a h in that position either, then why is it no syncretism t/h ?

The answer is: we reckon with syncretisms on the ground of what we know from other cases, on the ground of *analogy* (as admitted by Hjelmslev on p. 82: "This is done on the strength of an analogical inference that rests on the application of the generalization principle" ¹). As regards the Dutch example: first we decide on the ground of the plural $[pa:den]$ that the t in $[pat]$ is not simply the t of *kat*, and then we conclude that consequently this t is a syncretism of $t + d$.

This is what Hjelmslev does too, when he says that the conditions (for the overlapping of two entities) "lie in the relations which the *given entities* contract in the chain" (italics mine). This implies that we know from other sources what the "given entities" are, for in the chain $[pat]$ we do not find a "given entity" d contracting a certain relation in the chain after which it is changed into another entity: what we find is a t in $[kat, katə]$ and $[pat]$, and a d in $[pa:də]$. In the chain we can at most discover that d is an entity which never occurs finally, just as b and g and h and many sound combinations, and just as η , for instance, never occurs initially.

¹) See OSG p. 63.

By introducing the concept of neutralization into his analysis of language, in my opinion Hjelmslev acts contrary to his own main principle: that linguistic analysis shall be based on the relations we *find* between the entities *in the text*. "It is unquestionably correct", says Miss Fischer-Jørgensen, in approval of Trager's and Twaddell's neglecting neutralization, "that anything that may be said about the neutralization of contrasts in a language will also appear clearly from the rules for distribution and word-structure". (*Phonemics*, p. 10 English translation). She makes one hesitating restriction: "Perhaps the concept of neutralization should be restricted to those cases which occupy a special place because of the alternation of the forms of a word (e.g. [gip] — [ge:bən] ¹).

I believe that Miss Fischer-Jørgensen is right there. If it were assumed that synchronic linguistics could not do without the concept of 'neutralization', it is in the grammatical paradigms that we should have to look for it, only they allow us to establish 'neutralization'. If the *t* of Dutch [pat] had to be explained as a *d/t* syncretism, merely because the word [pa:də] occurs too, then the *t* of [sta:rt] would also have to be taken for such a syncretism, because the word [sta:rdə] occurs too: [sta:rt] = tail; [sta:rdə] = stared. But the reason why the *t* of [pat] might be considered as a *d/t* syncretism would be that the *plural* of [pat] is [pa:də]; and the *t* of [sta:rt] is a *t* because the *plural* of [sta:rt] is [sta:rtə].

This Dutch word 'staart' is a very fruitful example used by Reichling to demonstrate the "grammatical prerequisites to phonemic analysis" ²). There are two words 'staart' in Dutch:

- a) the noun 'staart' = tail, plural 'staarten';
- b) the finite form (present tense): 'staart' = (you or he) stares, preterite plural: 'staarden' = stared. Pronunciation: a) [sta:rt — sta:rtə]; b) [sta:rt — sta:rdə]. If we considered only this set of

¹ In her paper *Om Stemthedsassimilation* (Festschrift til L. L. Hammerich, 1952, p. 116–130), Miss Fischer-Jørgensen reckons with synchronic assimilation, which, she says, can also simply be formulated as laws for the combination of phonemes or variants *or for syncretisms* (p. 117, italics mine). In cases like German syllable-construction, which allows only breathed plosives and fricatives at the end of a syllable, (*lieblich* wit *p*), we have to do with a syncretism not caused by assimilation (p. 118). That we may reckon with a syncretism here is of course on account of the grammatical paradigmatic relation with 'lieben' with *b*.

² Pike: *Grammatical Prerequisites to Phonemic Analysis*, Word 3, 1947, p. 155–172.

expression forms, according to all rules of neutralization we should have to explain the *t* in the third form as a *d/t* syncretism, final *d* always being pronounced *t* in Dutch. The only reason why nevertheless we should not reckon with a syncretism here is that we know this *t* as the grammatical ending of a finite form (present tense) of all notional verbs. Indeed: the grammatical categories are the "other sources" from which we know what our "given entities" are.

As regards neutralization, too, Hjelmslev maintains his thesis of the analogous structure of the two planes of language: expression and content. So far only examples of neutralization in the expression plane have been given, but Hjelmslev also gives examples of "syncretism" in both planes, e.g. on p. 79 OSG: "the commutation between nominative and accusative in Latin (which applies, e.g., in the first declension) is suspended when, for example, nominative and/or accusative contract(s) relation with neuter". The example is continued on p. 80, where it is said that this syncretism is a case of coalescence, for "the syncretism of nominative and accusative has the meaning 'nominative-accusative' (in different contexts this meaning involves the variety manifestations that nominative and accusative have usually)".

To this kind of neutralization the same criticism applies as was given on p. 186: How do we know that, e.g., the Latin content-entity 'templum' is a syncretism of the content entities nominative-accusative? For both planes the conditions for neutralization "lie in the relation which *the given entities* contract in the chain".

This is a clear instance of a transfer of expression-phenomena into the plane of content. The result is confusing: in the first place it is hard to imagine 'templum' as a content-*chain*, in the second place we do not *find* in it a given content-entity 'nominative' contracting a relation with the content-entity 'neuter', which relation 'changes' the 'nominative' into another content-entity. What we actually find in the text is the expression-chain 'templum' both 'in the nominative' and 'in the accusative', while with other nouns in the same positions we find, e.g. *-us* in the nominative and *-um* in the accusative, *in the expression*. It has

become a custom to use the word 'neuter' as a convenient denomination for the class of nouns that is characterized by having the same expression-form both as 'nominative' and as 'accusative'.

But what kind of *content*-entity is 'neuter'? It does not exist, except as the denomination for an *expression*-phenomenon. Therefore the explanation is circular: we have syncretism between nominative and accusative when they are used with nouns that have syncretism between nominative and accusative.

Besides: what is meant by 'nominative' and 'accusative' in Latin 'templum'? Again analogy is introduced as a means to 'resolve' this syncretism (OSG p. 81, 82): "If, despite the syncretism, we can explain *templum* in one context as nominative and in another context as accusative, that is because the Latin syncretism of nominative and accusative in these instances is *resolvable*; we perform the resolution within the category of nominative and accusative, thus within the syncretism, by selecting a variety that does not contract overlapping (e.g., the nominative-variety from *domus* and the accusative-variety from *domum*) and by artificially introducing this content-entity into *templum* instead of the case-entity that enters therein; this is done on the strength of an analogical inference that rests on the application of the generalization principle¹⁾. A syncretism is resolvable only if such analogical inferences are possible on the basis of the results which the analysis of the linguistic schema provides. Such generalizing analogical inferences are not possible in the case of (Danish, BS) *top* and consequently we must here declare the syncretism *p/b* irresolvable", i.e. Danish *top* "may be pronounced with a *p* or *b* indifferently" (OSG p. 78)²⁾.

One might ask first of all how Hjelmslev proposes to carry this out: what exactly do we do to introduce the content-entity 'nominative' from "domus" into "templum"? Hjelmslev admits that this introduction is artificial. In fact it is so artificial a

¹⁾ See p. 207 ff.

²⁾ It seems that here we have a case of true neutralization in synchronic linguistics, that is to say if the *p* of *top* may indeed be pronounced with a *p* or a *b* indifferently in all positions. For the rest neutralization is a concept which belongs in diachronic linguistics, where it is of great importance. That cases of neutralization may very occasionally be found in a synchronic study of language is owing to the fact that language is not stationary but that there are always features which are disappearing and features which are appearing.

procedure as to seem incompatible with an *empirical* analysis of the facts of language. It seems to come very near to the mistake of traditional grammar: the automatic transposition of categories found in one field into another field in which they are not found. The true glossematic way of dealing with these problems would have to be a different one. We find what might be an instance of it on p. 66 OSG, where the subject and predicate are said to be bound *variants* of one and the same noun. Pursuing this line of thought it would be right to consider also the 'nominative' and the 'accusative' of 'templum' as bound *variants* of the noun 'templum', *expression*-variants, of course. Then we could not speak of a syncretism here, because a syncretism is established by an overlapping of *invariants* (See Hjelmslev's definition of neutralization, OSG p. 78).

The difficulty arises again from the attempt at an analysis of the content: Just as from 'ram' and 'stallion' Hjelmslev wants to disengage an entity 'he', so from cases like nominative 'domus' and accusative 'domum' he wants to disengage by an abstraction the separate "content-entities": 'nominative' and 'accusative'. Hence he speaks of: "the commutation between nominative and accusative in Latin" (OSG p. 79), not reckoning, it would seem, with the fact that we can only speak of the 'nominative' and the 'accusative' in the case of *certain nouns* with nominative and accusative *expression*-forms. It is not "the commutation between nominative and accusative which *applies*, e.g., in the first declension", but what *applies* in the first declension would be the commutation between a noun 'in the nominative' and a noun 'in the accusative'. And because in the case of neuters there is no such commutation, a neuter noun in the nominative and a neuter noun in the accusative are *variants* of one and the same invariant.

Hjelmslev has not defined what he understands by 'nominative' and 'accusative', which terms are used over and over again in the chapter on syncretism. Neither have I made an attempt in that direction; but one feature deserves attention.

It is a fact established by experience that 'templum', e.g., conveys to us *either* the "meaning" of 'templum in the nominative' *or* the "meaning" of 'templum in the accusative': if in translating a Latin text it is not at once clear which is meant we try first one, then the other solution: in the content, 'templum in the

nominative' and 'templum in the accusative' remain separate, in the content there is no syncretism between the two 'meanings'. Syncretism is only an *expression*-phenomenon.

There is another phenomenon mentioned by Hjelmslev as a case of syncretism which deserves attention. It is what he calls "overlapping with zero". But it is hard to see this still as a case of syncretism, so as the result of "overlapping", of neutralization.

By "overlapping with zero" is meant "the necesstiy ... of recognizing the existence of latent and facultative linguistic entities, especially 'phonemes'" (OSG p. 83). As an English example instead of Hjelmslev's French and Danish ones might be given latent *r* in English in final position: *far*: [fa:], but *far away*: [fa:rəwei].

I would prefer to call this a case of suspended manifestation, not of suspended commutation, and therefore not consider it as a case of overlapping resulting in a syncretism. Hjelmslev, however, is of the contrary opinion: "latency and facultativity cannot be defined as suspended manifestation; the functions in question are grounded in the linguistic schema, since the conditions under which latency and facultativity appear are fixed by relations in the chain and rest on dominance¹⁾. Latency and facultativity must then be understood as overlapping with zero" (OSG p. 83).

The reason why it is to be defined as an overlapping seems to be only the endeavour to preserve the symmetry of the system also in its terminology. For there does not seem to be any other objection to saying that there is suspension of the manifestation of *r* in the position mentioned.

Hjelmslev gives three interesting instances of how we can work with his concept of syncretism. He applies it first to a *logical conclusion*. A logical conclusion may be viewed as an analysis of a premised proposition, which in its turn may be viewed as a resolvable syncretism of its consequences. Consequently, a logical conclusion may be defined as an articulation of the premised proposition, "an articulation consisting in a resolution of the given syncretism which appears as an implication" (OSG p. 82).

¹⁾ We speak of dominance when we can say that the overlapping depends on the presence of a certain entity, e.g., English *r* and zero overlap in final position: final position dominates this overlapping.

Hjelmslev also applies the concept of syncretism to define a *paradigm*: "Insofar as a paradigm is considered not as a mere sum of its members (class as many) ... but as something different from its members (class as one) it is a resolvable syncretism of its members; by the resolution of the syncretism a class as one is transformed into a class as many" (OSG p. 83). Then follows a definition of *concept* by means of syncretism: "It should consequently be clear that insofar as we may try to attach a scientific meaning to the word concept, we must understand by a concept a resolvable syncretism between things (namely, the things that the concept subsumes)" (OSG p. 83). (I have had occasion before to draw attention to Hjelmslev's subsuming *things* under the notion of '*concept*' See p. 164).

2. *Catalysis*.

We now arrive at a very characteristic operation in the procedure of glossematic analysis. It is defined as "a registration of cohesions through the replacement of one entity by another to which it has substitution" (OSG p. 85)¹.

We remember that cohesions are those functions in which at least one of the two functives is a necessary condition for the presence of the other. Now it may occur in the analysis of a text that we find cohesions but that owing to some defectiveness of the text one of the two functives is missing. In that case we have to interpolate the missing functive because the function is solidary with its functives (See Ch. V).

As an example Hjelmslev uses Latin *sine*, which governs the ablative. If the linguist should find a Latin text which breaks off after *sine*, so that in that text *sine* is not followed by an ablative, he must *recognize* this as a case of interruption as he must register "also the outward relations which the given entities have, the cohesions that point beyond a given entity and to something outside it". In this case, therefore, he has to interpolate an ablative so as to be able to register a cohesion with an ablative, because an ablative is the prerequisite for *sine*. It is the interpo-

¹) *Cohesion*: see p. 74 above.

We have to do with *substitution* when one entity can be replaced by another entity without causing a change in the opposite plane: the *p* of *pen* and the *p* of *post*, e.g., have substitution. "Substitution is ... the opposite of commutation" (OSG p. 67).

lation of "a reason behind a consequence", as Hjelmslev puts it (OSG p. 84); or, in the words of the above definition: the entity *sine* is replaced by the other entity *sine* + *ablative*. To this entity *sine* has *substitution*, which according to p. 67 means that it can be replaced by it without this effecting a change in the other plane.

This is a very important condition for catalysis, in fact it is the condition that decides whether catalysis is permitted at all or not: we may only encatalyze an entity into the content if the expression remains the same, we may only encatalyze an entity into the expression if the content remains the same. In glossematics, *Take!* is catalyzed with the *content*-entity "you", but not with expressed *you* because that would change the degree of stress in the content. For the same reason the English expression "am coming to-morrow" may be catalyzed as "I am coming to-morrow" because this would not change anything in its content, but Latin "veniam" cannot be catalyzed into "ego veniam": it would not be the same in the content. To repeat the rule in Hjelmslev's words: "if the encatalyzed entity is an entity of content, (it) has the expression zero, and, if it is an entity of expression, (it) has the content zero" (OSG p. 85): catalysis takes place in only one of the two planes.

Catalysis should not be confused with mere *interpolation*; in fact only the example of *sine* given above is a clear instance of catalysis and is used as such by Hjelmslev in OSG p. 85, the other instances I adduced are cases of interpolation. In later discussions of the subject Hjelmslev distinguishes more clearly between the two terms than he does in OSG ¹⁾. Interpolation he calls then the insertion of a particular entity, any particular noun, pronoun, verb, etc., as was done in the above example "coming to-morrow" — "I am coming to-morrow".

What is introduced by catalysis, however, is "in most instances not some particular entity but an irresolvable syncretism between all the entities that might be considered possible in the given "place" in the chain". We saw above that a syncretism is said to

¹⁾ This appears from the Reports of Meetings of the glossematic committee of the Copenhagen Linguistic Circle, 1951, kindly put at my disposal by Miss Fischer-Jørgensen. (*Reports*).

be *resoluble* if in one context we can explain it as a representative of one of the terms that have entered into the syncretism, in another context as the other of the terms. (Cf. p. 189). If we cannot draw such inferences from analogy, the syncretism is said to be *irresoluble*. As an irresoluble syncretism in the expression Hjelmslev mentions *p/b* in Danish in the final part of the syllable, which may be pronounced either *p* or *b* indifferently. Thus it is important that in the example of Latin *sine* the encatalyzed entity was said to be an ablative, not a particular noun in the ablative, "since the ablative is not solidary with any particular morpheme ... but only with certain categories of morphemes" (OSG p. 85). See, however, the preceding section on the subject of "cases" as thought apart from nouns.

To the operation called "*interpolation*" there can be no objection whatever; in fact it has been neglected far too much, and it is one of Hjelmslev's great merits to have brought forward its indispensability in linguistic analysis. Too often the mistake has been made that, for instance in the example "With sugar?" — "Without", "without" was said to be no preposition because it was not "put before" anything — it was standing by itself. Interpolation brings here the only right solution, and the only correct analysis.

As to the operation called "*catalysis*", however, several difficulties arise. Let us first of all look at the kind of functives that are encatalyzed. About the functives that are encatalyzed Hjelmslev says that they "*would in no other way be accessible to knowledge*" (OSG p. 84, italics mine). It is not clear how this is to be interpreted. For from what follows in OSG it appears that "in catalysis we must take care not to supply more in the text than what there is clear evidence for". With *sine* we are allowed to encatalyze an ablative because "in the case of *sine* we know with certainty that an ablative is required" (OSG p. 85, italics mine) ¹).

¹) Cf. A. Martinet: "De deux choses l'une: ou bien nous savons déjà que *sine* est toujours suivi de l'ablatif; dans ce cas le texte mutilé ne peut rien nous apprendre à son sujet ...; ou bien nous ignorons encore que *sine* réclame nécessairement un ablatif, et, dans ce cas, nous sommes bien incapables de procéder à la catalyse. (BSLP 42, Paris '46, p. 41).

See also Garvin, *Review OSG* p. 83, who points out the wider scope of catalysis in glossematic analysis, the 'form' being encatalyzed into the 'substance' and the system into the text.

When choosing between the two statements italicized in these quotations, which are entirely each other's opposites, we cannot help choosing for the last: indeed: *we do know with certainty* that an ablative is required after *sine*. But *how* do we know? — The answer can only be: from the other cases in the text in which *sine* did always occur with an ablative.

But — it will be objected again — what gives us the right to consider *sine*, when found alone and when no interpolation is possible from the preceding text, as an interruption or omission in the text and not as another possible usage of *sine*?

Hjeltslev's answer to this question is very simply: because an encatalyzation of an ablative when *sine* is found alone does not clash with any of the cases in which *sine* is found: the encatalyzation is *non-contradictory* ¹⁾.

What, then, may be the *reason* for catalysis ²⁾?

Can it be that in the said cases of aposiopesis and abbreviation catalysis is necessary for the registration of the *functions*?

The answer must be: no, for catalysis is only permitted when we know that there is cohesion between the functive found and the functive to be encatalyzed, in other words: when we have registered the function already.

Is it possible, then, that in those cases of aposiopesis and abbreviation catalysis is necessary for the registration of the *functives*? Again the answer must be: no, for catalysis is only permitted when we know "with certainty" *which functive* is to be encatalyzed as the other term of the cohesion to be registered, in fact, only when we know this is catalysis possible at all.

On close inspection the procedure of catalysis as described in OSG seems to be a circle and as a matter of fact others have noticed this too: "catalysis depends on whether there is co-

¹⁾ However, that in practice matters will not be so simple is pointed out by Bazell, *Review OSG*. p. 91 fn: "... what frequency in necessary to justify catalysis in the exceptional cases? And supposing we should find *sine* with an accusative in some text: this might be a simple error, but it might also be an analogy valid for the language of the author; or again it might be something between the two, a form intruding from some lower style into the "classical" style intended".

²⁾ Much of what follows here was made clear to me by Hjeltslev personally and from the *Reports* mentioned on p. 193 fn.

hesion, and it depends on catalysis whether cohesion is found ¹⁾).

Also it appears that, contrary to interpolation, catalysis is not a necessary, nor even a possible procedure in the first analysis of a language: it presupposes this analysis and it presupposes that we know already which entities enter into cohesions with which other entities. This conclusion agrees entirely with Hjelmslev's view of his theory as the final control of what has previously been found by trial and error to obtain a description of language which is as complete and as simple as possible.

Let us see, therefore, to what extent catalysis would be a necessary operation in this final analysis.

Hjelmslev's reason for catalysis is "*appropriateness*", or in this case I would rather call it "*expediency*". The only criterion in this, as in many other cases in OSG, is whether the operation is "appropriate", expedient, whether it will give the desired result of a non-contradictory, exhaustive and simple description. In the case of catalysis it is especially the third requirement that counts.

To the objection that catalysis leads us in a circle the glossematic answer is, therefore, that we have to choose what gives the *simplest* solution: catalysis is *necessary* in all cases where a cohesion *can be obtained* — in as far as it does not lead to complications in the further analysis.

It is possible, for instance, to separate practically all the parts of a sentence from that sentence by means of catalysis, as Diderichsen pointed out at a meeting in the Copenhagen Linguistic Circle. The antecedent can always be taken up again by a pronoun and thus would not belong to the sentence: "Napoleon, he ..."; the same could be done with: "Yesterday, when ...", or with "He said this, that ...". Thus the sentence would consist of verb +

¹⁾ The formulation is Diderichsen's. (*Reports* 1950, p. 24).

There is another circle to be discovered when we realize that "ablative" should not be defined by having a specific meaning; but by its faculty of being governed by certain prepositions (i.a., by *sine*) (Eli Fischer-Jørgensen, *Washington lecture on Glossematics*, p. 4). Thus *sine* could be said to govern something that can be governed by *sine*.

See also p. 79 of the present, which shows that the principle of catalysis may have far-reaching consequences also for the setting up of the system of phonemes of a language as described in terms of relations between the elements: when it is assumed that the non-occurrence of a certain cluster of consonants, for instance, in a language is accidental, we should be allowed to fill up this "accidental gap" and utilize the cluster for the commutation. Here, again, the vicious circle becomes visible.

pronominal words and all the parts proper would fall outside it. Such a catalysis, however, would not be "appropriate": it would make the analysis more complicated instead of simplifying it. (*Reports* 1950, p. 7).

On the other hand, if in the example of Latin *sine* an ablative is encatalyzed it gives a simpler description because then we can say that *sine* always occurs with ablative — which does not clash with any of the facts found. If no ablative was encatalyzed we would have to say that in some cases *sine* presupposes an ablative but in other cases it does not; indeed: "if in the analysis one were reduced to registering relations on this basis one would end up in all likelihood ... merely registering pure *combinations*" (see p. 74). This would be contrary to the purpose of science as sketched by Hjelmslev on p. 75 OSG: "... the aim of science is always to register cohesions, and if an object only presents the possibility of registering constellations (See p. 74) or absences of function, exact treatment is no longer possible. To say that the object of science is the registration of cohesions means, if we divest this statement of the terminological wrappings introduced by us, that a science always seeks to comprehend objects as consequences of a reason or as effects of a cause. But if the object can be resolved only into objects that may all indifferently be said to be consequences or effects of all or none, a continued scientific analysis becomes fruitless".

For a better understanding of the way catalysis is practised I mention a few other instances that have been given of it in the glossematic committee of the Copenhagen Linguistic Circle.

At a meeting in 1950 Hjelmslev suggested to encatalyze in Danish an imperative to all vocatives because it gives a simpler analysis. Inversely a vocative meaning should be encatalyzed to all imperatives in Danish because this also makes the analysis simpler: a cohesion is obtained between, e.g., "you" and "come", and thus in all cases cohesion between verbal characteristic and "subjective", and you avoid having to register the vocative as a separate case.

This example shows that, when there is a chance of obtaining a simpler description, the freedom to encatalyze goes rather far.

But granted that in such cases as these catalysis does give a

simpler description — it only means that the difficulty is pushed a bit further on, it is not solved. For after we shall have found the system of a language with the aid of catalysis there still remains the task to register the *conditions* under which certain functives (the encatalyzed ones) may be left out in the expression — they, too, belong to the language-system¹⁾.

Yet Hjelmslev has said that it is not an important systematic difference whether the cohesion is obtained with or without catalysis; it is merely an accidental difference in usage; catalysis only means an uncontradictory generalization. But I am not so sure that it is no more than that; I may be mistaken, but especially in the cases of the imperative and vocative it seems strange to speak of an *accidental* difference in *usage*: surely it is a feature of the *system* that in the imperative the “subjective” can be left out whereas in the indicative this is impossible as a rule.

It is catalysis, too, which helps to distinguish formally between “he saw the man the horse and the cow” and “he gave the man the horse and the cow”²⁾: in the first case we can encatalyze “and”, in the second “to”.

But even so I believe the circle becomes visible again: it is the *meaning* of the words which decides whether such a catalysis is possible. It is the *meaning* after all, which shows what relations there are between ‘gave — the man’ on one hand and ‘saw — the man’ on the other. It is the *meaning*, therefore, which is to a great extent decisive also for a *formal* analysis.

This conclusion has far-reaching consequences and among the Copenhagen Circle it is Miss Fischer-Jørgensen who has brought an old truth to the fore, a truth which tends to be neglected at times in glossematic analysis, when she remarked: “it is on the whole a problem if in the preliminary stages of glossematic analysis, when the facultativity (of a certain entity) in various “places” is established, one does not operate with these traditional analyses of *meaning*” (*Reports* 1950, p. 23).

Of course we do. And it is Hjelmslev himself who says in OSG that if we omitted to take the sign-function into consideration “we should ... simply be deprived of an objective criterion capable of yielding a useful basis of analysis” (OSG p. 45/46).

¹⁾ Diderichsen made a similar observation (*Reports* 1950).

²⁾ The example is Miss Fischer-Jørgensen's.

"It is curious", says Haugen, "to see how those who eliminate meaning have brought it back under the covert guise of distribution" *Directions in Modern Linguistics* p. 219).

Ebeling gives a striking example in his hypothetical case of an adjective *a* (meaning "wooden") being incompatible with a suffix *b* (denoting a "temporary quality"). If we group all the adjectives that have this "formal" characteristic in common together, "the whole 'category' will turn out to have a feature of meaning common to all members: 'made out of a certain material'. But then we are doing a dangerous thing: *the fact that no object is alternately made out of wood and metal is attributed by us to the particular structure of a language*". (C. Ebeling, *Phonemics and Functional Semantics*, *Lingua* III, 3, 1953, p. 319, italics mine). Cf. Haugen: *she made him a good husband because she made him a good wife* "is clear because we know that a man cannot be a wife" (Op. cit. p. 220).

Of course the two criteria go together, and Uhlenbeck thus states that "the distinction of word-classes is not primarily based on difference in meaning, but always on correspondences between form and/or valence on the one hand, and meaning on the other" (*The Study of Wordclasses in Japanese*, *Lingua* III, 3, 1953, p. 331; Cf. Haugen, op. cit. p. 221).

Togebly has not the same: we should, he says, "définir les catégories et les éléments de la flexion par les règles auxquelles ils sont soumis, pour en déduire ensuite leurs définitions sémantiques" (*Mode, Aspect et temps en espagnol*, 1953, p. 5). See, however, Ebeling's and Haugen's examples above.

Zellig Harris' opinion presents the same difficulty (*Methods in Structural Linguistics*, 1947). On p. 7 he states that "in principle, meaning need be involved only to the extent of determining what is repetition". "... (the) differentiation of *life* and *rife* on the basis of meaning is only the linguist's and the layman's shortcut to a distributional differentiation". Incidentally we might point to what Bloch said about this self-same shortcut: that "any linguist who refused to employ it would be very largely wasting his time". (*A set of Postulates for Linguistic Analysis*, *Language* 24, 1948, p. 5). But besides, it must be pointed out that when we have to have recourse to meaning to decide "what is repetition" this means that we have to have recourse to meaning at every stage of our analysis. And indeed Harris admits this when on p. 20 he states that in accepting the criterion of "the hearer's response", "we approach the reliance on 'meaning' usually required by linguists¹).

¹) It would seem as if Rulon Wells' paper on *Immediate Constituents* is not quite free from the same difficulty when on p. 85 he says that it is possible to leave the factor of meaning out of account until part III of his analysis, whereas at the

Something of this order seems inescapable". He admits it also when on p. 29 he says: "When what we obtain is not an admitted repetition, (and, sometimes, even when it is) we have to judge whether utterance B is indeed a repetition of utterance A, by considering the situation, *meaning*, and sounds (*italics mine*). Thirdly, he admits it implicitly when on p. 32 he recommends as a "more exact test" in the case of two different utterances which sound more or less alike, to ask two informants, tell one of them which to say, and see "if the other can *guess which he said*". "If the hearer guesses right about fifty percent of the time then there is no regular descriptive difference between the utterances; if he guesses right near one hundred percent, there is" (*italics mine*). And indeed: "every utterance can be completely identified as a complex of phonemic elements" (p. 21), but it seems extremely difficult to identify two identical utterances by their *phonemes* without subdividing those long sequences of ever recurring meaningless units into larger, meaningful ones: words. Besides, we do not build up our sentences out of phonemes, neither out of morphemes. We build them up out of words. It would be more correct, therefore, to modify Harris' statement in this sense: every utterance can be completely identified as a complex of autonomous meaningful complexes of phonemic elements".

In conclusion we can agree with Gleason (Ch. III of the *Results* (Voegelin and Sebeok), p. 60), who "classed linguists into two groups, those who consider "meaning" reprehensible and those who consider it respectable. Whatever other kinds of data than distribution the first kind were willing to use, they would call it other than "meaning". This is largely a matter of terminology and reaction against a kind of past linguistics. One can't segment into morphemes without meaning; after segments are obtained, all linguists agree on leaving meaning out".

beginning of part I it seems to be meaning only which decides whether a certain sequence can be viewed as an expansion of another, and whether the environments of two sequences are the same, and "what sequences may ... fill the blank in *the () of England* (p. 86, Word, 8, 1952).

CHAPTER XI

ULTIMATE RESULTS OF THE DEDUCTION

After a kind of recapitulation of the earliest chapters of OSG, in the light and in the terms of the expositions which have followed since, in Chapter 20 of OSG entitled: "Entities of the Analysis", Hjelmslev touches on two points which deserve more attention. Briefly put they are these:

- 1) in the syntagmatic deduction: the further reduction of the phoneme to still smaller entities.
- 2) in the paradigmatic deduction: the completely analogous categorical structure of the two planes.

1. *The Reduction of the Phoneme*

Glossematic analysis, says Hjelmslev, will ultimately yield "entities of smaller extension than those which up to now have been viewed as the irreducible invariants" (OSG p. 88). This he holds true for the content plane as well as for the expression plane.

As to the analysis of *lexical content units* like 'ram' and 'stallion', it has been dealt with at large in Ch. VIII; in this place the further analysis of *morphological content units* and the *expression units* will be considered.

Hjelmslev does not say much about it nor does he give a single example. The smallest elements that are inventorized will be "*taxemes*", i.e. *virtual elements* ¹⁾.

"For the expression plane the taxemes will *grosso modo* be the linguistic forms that are manifested by phonemes" (OSG p. 88).

But even *taxemes* will not be the ultimate entities established by glossematic analysis: they may be further analyzed into the smallest irreducible entities, the *glossemes*, on the basis of a "*universal division*" ²⁾. This appears when they are ordered on the basis of special rules into systems of two, three or more

¹⁾ See p. 86.

²⁾ A universal division is a division which can be performed on any object whatever (Def. 32 OSG. Cf p. 86 of the present).

"dimensions" ¹⁾). As an example for the content plane the systems established in "*Cas*" are mentioned by Hjelmslev (OSG p. 89 footnote). Corresponding systems, he says, may be established for the expression plane.

For a clearer insight into Hjelmslev's method *in practice*, therefore, of which OSG gives only too few specimens, we shall first dwell a little longer on the instance of analysis of the *content* plane: the analysis of case as described in *Cas*.

Hjelmslev counts himself among the "localists", those who have "la conception spatiale" as basis of the linguistic system, because "cette conception est appliquée par le sujet parlant aux divers ordres du phénomène objectif, qu'il s'agisse de l'espace, du temps, de la causalité logique ou de la rection syntagmatique". (*Cas* p. 37). After this motivation of "la conception spatiale" Hjelmslev goes on to say that in the matter of case the genitive is characterized by "éloignement", the dative by "repos", the accusative by "rapprochement" (p. 38).

Hjelmslev underlines specially the localist thesis of "le rapport entre cas et prépositions (p. 41): il y a pendant le développement des langages une transition constante de prépositions dans le domaine des formants casuels" (p. 42). This introduction of the concept of *direction* into the analysis of case is not contrary to the immanent method, says Hjelmslev, for "la catégorie de la direction se reflète directement dans le langage sans qu'il y ait scission extra-linguistique ²⁾" (p. 50). "La théorie localiste a jeté les bases à une théorie casuelle cohérente qui consiste à voir dans l'idée abstraite de la *direction* le dimension essentielle et primaire de la catégorie qui nous occupe" (p. 55). But the dimension of direction is not enough to explain all cases that are possible, there is another: Rask's two-dimensional system is necessary, in which the second dimension is "le degré d'intimité avec lequel les deux objets envisagés par le rapport casuel sont liés ensemble" (p. 65).

Having established the requirement of a two-dimensional system of "direction" and "degré d'intimité", Hjelmslev approaches the problem of the structure of the system from the point of view of the dimension of *direction*: "Puisque les faits casuels se rangent par eux-mêmes selon un principe de symétrie,

¹⁾ The term "dimension" is not explained or defined in OSG.

²⁾ See p. 45 of the present.

... chacun cas rentrant dans une seule et même dimension peut être défini d'une façon mathématique ou logique en utilisant les symboles $+$, \div , 0 , $\frac{+}{\div}$, $\frac{+}{\div}$, $\frac{(+)}{\div}$: positif, négatif, neutre, complexe, complexe-positif, complexe-négatif" (p. 98). But in reality, Hjelmslev continues, the facts are arranged according to a different principle, because there are in the category terms that are neuter in more than one sense, e.g., nominative and locative: the locative has a clearly defined signification: "ni éloignement ni rapprochement", whereas the nominative is "dénué de signification, une forme vide qui signifie tout et qui ne signifie rien: c'est bien la direction, mais n'importe quelle direction":

"locatif: neutre et *concentré*

nominatif: neutre et *expansif*". (p. 99). This is represented in the following scheme:

Rapprochement	$+$	}	$+$	$\boxed{}$	locative	$+$	$\boxed{}$	nominative
Eloignement	\div		0	$\boxed{}$	(occupies only	0	$\boxed{}$	(occupies the
Neutre	0		\div	$\boxed{}$	the zero-area)	\div	$\boxed{}$	zero-area but also the other two)

"Dans tout système casuel opérant sur une seule dimension, il n'y a qu'un seul cas qui comporte une signification *relativement simple*, restreinte, précise et bien définie; ce cas peut désigner ou bien le terme positif ou bien le terme négatif de la dimension considérée" (p. 101). Example: Latin, in which language, according to Hjelmslev, "tout se groupe autour de l'idée d'éloignement": the only well defined case in Latin is the ablative. The Latin system is therefore built up on the basis of the ablative: éloignement: the Latin system has the "orientation négative" (p. 102). In Greek, on the other hand, everything turns round the accusative: rapprochement: the Greek system has the "orientation positive" (p. 102). In English, where there are but two cases: genitive in -s and non-genitive, "... le génitif est le terme intensif: lui seul ... comporte une signification restreinte et bien définie. Le non-génitif est ... indéfini, indifférent à l'égard des distinctions casuelles" (p. 114). As value of the genitive Hjelmslev gives "éloignement, alors: orientation négative". Explanation: "On sait que le génitif anglais en -s est un génitif exclusivement possessif: il peut être interprété: l'objet qui le reçoit constitue un

point ou une sphère dont émane ou dérive l'autre objet entrant dans le rapport casuel" (p. 114).

While those passages are full of interesting inventions, many of which are worth thinking over, they would nevertheless have to be considered as inventions, not as discoveries: they seem to be too arbitrarily established. Why, for instance, should the genitive in English have a better defined signification than the one in Latin? How does Hjelmslev prove his statements that in Latin everything turns round the ablative, in French round the accusative, and in English round the genitive? Are there any facts of language that point in this direction? No doubt "corresponding systems may be established for the expression plane" (OSG p. 89), but, what justifies such systems? The only justification seems to be that there is no contradiction and that the description is made simpler. The articles on the subject of such arrangements abound with expressions such as: "... allows of an arrangement", "... admits of a solution", ... "admits of the explanation".

Here are some quotations, as an illustration of the establishment of a glossematic system of *expression*, from the pages 18 and 19 of *Grundtraek af Det Danske Udtrykssystem* by Hjelmslev: "Men da intet taler derimod, foretraekkes af simpelhedsgrunde den løsning"

"idet stavelsesgraensen modsigelsesfrit lader sig postulere"

"De tilfaelde af *η* . . . lader sig opfatte som finalt *ng*" (p. 18)

"for at imødekomme simpelhedens princip, tilsigtes en opstilling der"

"I mange tilfaelde lader en langvokal sig fortolke modsigelsesfrit som" (p. 19).

Translation: "But as there is nothing against it, we prefer on the ground of simplicity the solution". "as the end of the syllable can without contradiction be postulated. . . ." "The cases of [*η*,] allow of an interpretation as final [*ng*]" (p. 18). "To meet the requirement of simplicity, we aim at an arrangement which". "In many cases a long vowel admits without contradiction of an interpretation as" (p. 19). That here, too, matters are not so simple as they look at first sight is again pointed out by Bazell. Referring to OSG p. 24-25, where it is said that between *sine* and the ablative there is *selection* whereas between *ab* and the ablative there is *combination* (in Hjelmslev's sense), because *ab* may also occur as a verbal prefix, which is not the case with *sine*, Bazell observes that this is the stage where ordinary linguistics would stop but that glossematic analysis goes further: "But the structural

linguist will be inclined to reduce the mutually exclusive *ab-* and *au-* to variants of the same morpheme, and to ask whether there is not some verbal prefix which functions as a variant of *sine*. Is not the relation between *sine* and *se-gregare* similar to that between *cum* and *con-gregare*? From a synchronic standpoint is not *se-* in *securus* the compositional variant of *sine*? If it is, then the relation of *sine* quâ morpheme to the ablative is merely one of 'combination' (Review OSG. p. 90).

The ordering of *expression taxemes* into a system is said to take place "on the basis of special rules" (OSG p. 88), but no special rules are stated. The only information given about them is that they "rest on the fact that the linguistic elements in one and the same category are not only numerically but also qualitatively different" (OSG p. 89).

Surely Hjelmslev does not mean that this quality, too, is only to be defined by its *relations* to the other taxemes? In that case I do not see how a systematization as is meant here would be possible, and the omission of an example in which such a systematization is carried out in an inventory of actually found phonemes is the more to be regretted. As far as is to be seen now, the "setting up into a system" of a taxeme inventory is a matter of *substance*, and will be most effective, and most appropriate, for taxemes manifested in their natural substance: sound.

And indeed there is a statement which points in this direction in OSG p. 86: "The 'algebraic' entities with which the procedure operates have no natural designation, but must of course be named in one way or another; this naming is arbitrary and appropriate, in harmony with the whole character of linguistic theory. In the arbitrariness of the names lies the fact that they do not at all involve the manifestation; in their appropriateness lies the fact that *they are chosen so that it becomes possible to order the information concerning the manifestation in the simplest possible way*" (italics mine). In 1950 the statement is more definite: in order to satisfy the simplicity principle, an arrangement is aimed at for Danish taxemes of expression "which will show the greatest possible affinity to the substance" ¹⁾. Actually the arrangement Hjelmslev gives in this article does not only show

¹⁾ L. Hjelmslev, *Grundtræk af det danske udtrykssystem med særligt henblik på stød*. Selskab for Nordisk Filologi, Årsbetretning for 1948-49-50, pp. 18, 19. Translation mine.

affinity to the substance but is entirely based on it, its two "dimensions" being: "the contrast front-back" and the contrast "closed-open".

The parts into which Hjelmslev proposes to resolve the taxemes would be the *glossems* proper. Although the "glossems" have so far been considered as equivalent more or less to phonemes, this appears now to have been only an approximation: with Garvin we realize that Hjelmslev's "glossems of the expression" ('cenemes') rather correspond to Z. Harris' 'simultaneous components' or to the Prague School's 'distinctive features'.

That there is no such correspondence, however, between the *establishment* of these 'cenemes' and the establishment of the 'distinctive features', appears from the examples which can be collected from various papers¹⁾ and which prove that "an analysis carried out strictly according to the simplicity principle often leads to essentially different results from the phonemic analyses hitherto attempted" (OSG p. 88)²⁾.

Of the three principles mentioned as constituting Hjelmslev's "empirical principle" (See p. 38), the simplicity principle seems to be the leading one in the establishment of systems of cenemes, in which it is always applied so as to get the smallest possible inventory of entities. In this connection again, three main principles are of importance:

1°. *The principle of economy*: "The description is made through a procedure. The procedure shall be so arranged that the result is the simplest possible and shall be suspended if it does not lead to further simplification".

2°. *The principle of reduction*: "Each operation in the procedure

¹⁾ See for earlier examples:

L. Hjelmslev, *Quelques réflexions sur le système phonique de l'indo-européen*. Mélanges Linguistiques offerts à M. Holger Pedersen. Acta Jutlandica IX, 1. 1937, p. 39, 40, 41.

²⁾ Another view is held by Uldall, who holds that both linguistic forms (phonemes) and physical "distinctive features" can and must be described as terminals of functions. But a distinctive feature, voice, e.g., is not found, he says, by analyzing for instance the *m* of /mi : zli/ ('measly'), voice extends through the whole of /mi : zli/. Thus the unit /mi : zli/ must be divided into phonemes and into distinctive features, but the two divisions are not conform, they belong to different dimensions. The distinctive features form classes of their own, and Uldall would prefer to use the term phoneme in this level and "in something like Daniel Jones's sense of "a family of sounds". However, it seems to me that in this way we arrive just the same at an enumeration of distinctive features - of variants, it is true, but via the principle of reduction also of the invariants.

shall be continued or repeated until the description is exhausted, and shall at each stage lead to the registration of the lowest possible number of objects". The *refined formulation* of this principle is: "Each division (or each division complex) in which functionives are registered with a given function as basis of division shall be so made that it leads to the registration of the lowest possible number of elements" (OSG p. 56).

There is another principle which Hjelmslev uses to reduce the inventories: the '*principle of generalization*': "If one object admits of a solution univocally, and another object admits of the same solution equivocally, then the solution is generalized for the equivocal object" (OSG p. 63).

Finally what might be called a *still more refined principle of reduction*: "Entities which, on application of the principle of generalization, may be univocally registered as complex units including only elements registered in the same operation, must not be registered as elements" (OSG p. 63).

We find these principles applied in the recent article on the Danish system of expression mentioned above: *Grundtraek af det danske udtryksystem*. (See p. 205 note 1).

The *inventory* of consonants registered for Danish is, with the exception of the 'stød': *b, d, f, g, h, l, m, n, r, s*. and the "pre-taxemes" *j, ʃ, p, t, k*. "Pretaxemes" are the entities which will not have remained as taxemes after the analysis is finished. On those pretaxemes the following *reductions* are carried out: (symbol for 'reduction': \equiv).

$j \equiv i$ (in marginal function)

$ʃ \equiv si$ (homosyllabic)

$p, t, k, \equiv hb, bh, hd, dh, hg, gh$.

About the last reduction the following remarks are made: "... both analyses are possible. But as there is no objection to it, the solution is preferred, on the ground of simplicity, that in some positions we register *hb, hd, hg*, to prevent us from interpreting, for example, a group like $pl \equiv bhl$ as containing a possible duplex group *hl*, which does not occur alone, — and that in other positions we register *bh, dh, gh*, to prevent us from interpreting, for example, a group like $lp \equiv lhb$ as containing a possible duplex group *lh*, which does not occur alone. The overlappings $p/b, t/d, k/g$ at the end of a syllable in cases like 'kop', 'maet', 'gik' are then reduced to a facultativity of *h*'. Also the Danish η is a good illustration of the glossematic method of reduction: $\eta \equiv n, ng$. η is a variant of *n* before *g*

and *k*; from this we generalize to "bank": bang(h). The cases of *ŋ*, where according to these rules it is no variant of *n*, admit of an interpretation as final *ng*, because *n* can also here be assumed to be realized as *ŋ*, and because *g* under these conditions is assumed to be realized as latent" (p. 18).

Roughly, this method can be compared with the Prague School analysis as follows: For the latter an analysis of Danish consonants might yield, i.a.,: *t, d, ɖ, n, ŋ, h, g*. By a glossematic analysis these seven elements would be reduced to four: *t* \equiv *dh*; *d*; *ɖ* \equiv *d* (in final position); *n*; *ŋ* \equiv *ng*; *h*; *g*; which leaves the consonants: *d, h, n, g*.

Concerning this method of reduction, which gives more elements in the chain but fewer in the system, Miss Fischer-Jørgensen remarks rightly that we could thus reduce the whole system to one element repeated a certain number of times¹). Hjelmslev thinks to prevent this by his "principle of generalization" (OSG p. 63, see also p. 207 of the present): *ŋ* may always be reduced to *n + g* (or *k*) because it is sometimes found as a variant of *n* in that position: 'man kan — [maŋkan]. But "sous sa forme actuelle, ce principe est vraisemblablement trop vague pour pouvoir empêcher les réductions arbitraires". (Eli Fischer-Jørgensen, *Remarques phonémique*, Recherches, p. 225, 226).

Out of many possibilities the glossematician chooses the one which will give the simplest description of the manifestation²). And on this point I quote Miss Fischer Jørgensen again: "C'est ce que M. Hjelmslev prétend faire en théorie, et c'est ce qui lui permet de dire que l'analyse est indépendante de la substance. Mais dans la pratique on tient compte de la substance à toute étape de l'analyse, et il ne s'agit pas, comme pour l'épreuve de la commutation, des seules différences, mais de la constatation d'une certaine hiérarchie de différences et de ressemblances qui rendent une

¹) Miss Fischer-Jørgensen mentions a drawback of this way of reducing the phoneme inventory, in that it will result in a greater uniformity of distribution, consequently in a very restricted classification on distributional grounds. See p. 67 of the present, where also other objections are made with regard to the glossematic concept of simplicity.

Cf. also 'Phonemics', by the same author, Archiv f. Vergl. Phonetik, V, 1951, p. 170-200.

Further: "To me it appears dangerously easy to fall into error when to support a theory, a linguist must hear things that 'had to be there' — particularly when the items "heard" are silent". (Kenneth L. Pike, *More on Grammatical Prerequisites*, Word, 8, 1952, p. 108.

²) Cf. Eli Fischer-Jørgensen, *Danish Linguistic Activity 1940-1948*, Lingua II, 1, p. 100, where attention is drawn to the same feature. Also in other papers by the same author this point is stressed again and again.

identification plus ou moins arbitraire qu'une autre" (p. 231, italics mine) ... " ... on se demande en outre si ce principe de généralisation n'implique pas des égards à la substance. Si l'on constate, p. ex., que *ŋ* peut en danois se trouver en variation libre avec *n* devant *g* et *k*" (see the above example *man kan*) "et si l'on interprète alors par une généralisation de cette observation tout *ŋ* devant *g* et *k* comme une variante de *n* (p. ex. *tanke* [*tanke*]), cette solution se présente non seulement parce qu'elle est non-contradictoire et simple, mais parce que du point de vue de la substance il s'agit du 'même' *ŋ*" (p. 232).

There follows in Hjelmslev's article an arrangement into a system which, as was pointed out above, indeed "presents the greatest possible affinity with the substance": the first "dimension" being built on the contrast front-back, the second on the contrast closed-open. Why precisely these two contrasts are chosen as bases of the dimensions, is not accounted for. It may be useful to stress again what glossematians keep repeating: those analyses and those arrangements are not meant to be final, they must be looked upon as attempts to give a systematic description; they belong to the systems "tentatively set up" and later to be confronted with the final, the general system, in which confrontation they will be revised and receive their definite shape.

2. The completely analogous "categorical" structure of the two planes.

After the syntagmatic deduction the highest degree taxeme-categories found are distributed into paradigmatic categories. It is interesting to see how Hjelmslev has managed to present the two planes as built up according to an entirely identical plan, the *members* of the categories being the only point of difference between them. This "discovery" of the "completely analogous categorical structure" of the planes is indeed "of far-reaching significance for an understanding of the structural principle of a language or in general of the "essence" of a semiotic" (OSG p. 90). It is a pity that Hjelmslev does not give a single instance of this in OSG. It is true: "the science of categories ... presupposes ... a comprehensive and ... a closely coherent apparatus of terms and definitions", but it must be possible to give the reader at least some idea of what it is like. Hjelmslev has already worked it out

more in detail himself in *Essai*, in which he deals with morpheme categories. OSG leaves the reader entirely in the dark on this point whereas a scheme, at least, might have been given on the basis of *Essai* to bring out this "analogous structure" of the two planes. I have arranged the categories Hjelmslev distinguishes into such a scheme, which follows here. For the terminology I refer to Ch. 11 OSG and to the explanation which follows the scheme, for a recent critical application see Paul Diderichsen, *Morpheme Categories in Modern Danish*, (TCLC V, 1949, p. 134–156). Diderichsen mentions the existence of a later, different, version of the theory "(not yet published)" and of further papers "(not yet published)" by Hjelmslev on the distinction of extense and intense morphemes (See L. Hjelmslev: *Le verbe et la phrase nominale*, Mélanges ... Marouzeau, 1948, p. 253–281). At the end of his paper Diderichsen concludes: "Until the parts of the glossematical theory concerned with these problems are published, if only in a tentative and provisional form, morphemataical investigations on glossematical principles will be a somewhat hazardous task, subject to all kinds of uncertainty and misunderstanding" (Op. cit. p. 154).

The only reason why I give the following scheme is, therefore, to give the reader an idea as to the way in which Hjelmslev proposes to obtain his ultimate results. It should be borne in mind that it is a very much simplified scheme, in which I hope no essential features have been neglected.

Content Plane (Plerematic)			
Constituents (Pleremes)		Exponents (Morphemes)	
<i>Central Const.</i> (radical elements)	<i>Marginal Const.</i> (derivational elements)	<i>Intense Exp.</i> (noun morphemes: case comparison number gender article)	<i>Extense Exp.</i> (verb morphemes: person voice stress aspect mood tense)

The same "categories": constituents, exponents etc. glossematics finds in the expression plane:

Expression Plane (Cenematic)			
Constituents (Cenemes)		Exponents (Prosodemes)	
<i>Central Const.</i> (vowels)	<i>Marginal Const.</i> (consonants)	<i>Intense Exp.</i> (accents)	<i>Extense Exp.</i> (modulations)

See L. Hjelmslev, *Essai d'une théorie des morphèmes*, Actes IV Congr. Intern. des Linguistes, 1936, p. 145. and *La syllabation en slave*, Mélanges philologiques offerts à M. Aleksander Belič, p. 318.

Also: *The syllable as a structural unit*, Proceedings III Intern. Congr. of Phonetic Sciences, 1938, p. 266–272.

Explanation of the term used:

Constituents: “ces paradigmes dont les membres ne peuvent pas entrer dans un rapport de direction”¹⁾ (*Essai*). “... something not capable of being governed by a government taking place between accent syntagms or between units larger than accent syntagms” (*The Syllable*).

Exponents: “ces paradigmes dont les membres peuvent entrer dans un rapport de direction” (*Essai*). “... something capable of being governed by a government taking place between accent syntagms or between units larger than accent syntagms” (*The Syllable*).

Intense exponents: “... can only characterize a chain that is smaller than a complete utterance” (*The Syllable*). “... ceux qui ne peuvent pas caractériser un énoncé catalysé” (*Essai*).

Extense exponents: “such as are able to characterize a complete utterance” (*The Syllable*). “... ceux qui peuvent caractériser un énoncé catalysé” (*Essai*)²⁾.

In the articles from which these definitions have been taken there are some difficult points. In *Essai* Hjelmslev mentions another kind of exponent besides the one mentioned above which he calls “exposant fondamental”: the “exposant converti”. This is “un exposant qui — en des conditions déterminées — fait partie d'un paradigme dont aucun membre ne

¹⁾ “Direction” covers the facts of “government”.

²⁾ *La Syllabation en slave* gives still other definitions:

Exponents: les glossèmes qui caractérisent la chaîne sans la constituer.

Morphèmes extenses: ceux qui peuvent caractériser l'ensemble d'une phrase.

Morphèmes intenses: ceux qui ne possèdent pas cette faculté (p. 318).

peut être dirigé". This is rather confusing beside the definition of "constituent".

The second point of confusion is in the word "syntagm" used in the definitions of constituent and exponent. A *syntagm* is "a unit comprising both constituents and exponents" (*The Syllable*) "Est syntagme une unité composée d'un thème et des exposants fondamentaux qui le caractérisent et qui peuvent être appelés la caractéristique du syntagme" (*Essai*). *Theme*: each of the two chains into which we divide e.g., [dɔk tə], they have each an accent but they do not themselves consist of accents. They consist of constituents. Now the difficulty is that the word *accent syntagm* is used to define exponents and constituents, but that the word *accent syntagm* in its turn is defined by means of these two concepts: it is an accent theme (= group of constituents) with its accents (= group of exponents). Thus *accent* may be described, according to the above definitions, as "something capable of being governed by a government taking place between accent themes with their accents. Which looks like a circle.

Further it is to be objected to the definitions which *The Syllable* gives of constituents and exponents, which are units of the content plane as well as of the expression plane, that they are defined by means of a unit in the expression plane (accent). For that reason the definitions that *Essai* gives of the two terms are to be preferred.

It will be noted that such units as radical elements, derivational elements, morphemes, are presented as units in the *content* plane. When seeing the content units referred to by terms which have always been used to denote units of the expression, the reader should remember that what is meant is actually: *the concepts expressed by* those units. In 'he sings', for instance, the morpheme is not -s, but there is the *group of morphemes*: third-person-singular, present-tense, active, indicative. All these morphemes are *expressed by* -s.

The concept 'sing-' of 'he sings' is not a morpheme in Hjelmslev's sense, it is called a 'radical element', by which is meant again: *the concept expressed by* the radical element in the expression. Hjelmslev's *morpheme*, therefore, does not correspond to Bloomfield's morpheme, which also includes the radical element and which is used for the expression units only, but it corresponds more or less to Sapir's *relational concept*, just as Hjelmslev's derivational elements correspond to Sapir's derivational concepts, and his radical elements to Sapir's radical concepts. (E. Sapir, *Language* p. 92, 93).

Of the four elements: central constituents, marginal constituents, intense exponents, extense exponents, it is the last group

that are most "expansive", i.e., whose influence extend farthest in the sentence. As is seen from the definitions, "only exponents can be governed by elements in another unit": Thus, a rising intonation may presuppose a following falling intonation, a weak accent a following or preceding strong accent, etc. Likewise, morphemes have mutual relations beyond the word boundaries, within the sentence¹⁾. And of these the extense exponents (verb morphemes and modulation) can characterize a complete sentence.

¹⁾ Eli Fischer-Jørgensen, *Glossematics*. Lecture in the Washington Linguistic Club, 26 March 1952.

Cf. also the same author in "*Phonemics*", *Archiv. f. Vergl. Phonetik*, V, 1951, pp. 170-200. Esp. p. 22 (of the translated reprint).

CHAPTER XII

LANGUAGE AMIDST CONNOTATIVE SEMIOTICS, META- SEMIOTICS, SEMIOTICS, SYMBOLIC SYSTEMS AND NON-LANGUAGE

1. *Connotative semiotics and metasemiotics* ¹⁾

So far OSG has only dealt with language deprived of any stylistic or other particular features, the so-called *denotative* semiotic, by which is meant, in glossematic terms: “a semiotic none of whose planes is a semiotic” (OSG p. 101).

Chapter 22 OSG, titled: “*Connotative semiotics and metasemiotics*”, however, mainly deals with what we could in ordinary linguistics call styles and different languages in the widest sense on one hand (connotative semiotics), and every kind of worded observation of — and science concerning — language on the other (metasemiotics).

A certain style, as a style, expresses something: it may, in Hjelmslev's conception, in itself be considered as a sign-structure superposed on the signs, e.g. the words, we use: it may in itself be considered as a “semiotic” superposed on the semiotic of denotative language ²⁾. The expression side of the style consists of the words and modulations it uses (their expression *and* their

¹⁾ As regards this term, I quote Jakobson (*Results*, p. 23): “The study of language as a function of something outside of the structure has been called metalinguistics, ethnolinguistics, psycholinguistics, and exolinguistics. Choice of the term metalinguistics is most often criticized as introducing an ambiguity since, in philosophical usage, it refers to the study of that language which we employ to talk about another language.

As used by Trager and others, metalinguistics has come to refer principally to the theory that perceptions are categorized by a given language – a theory which the 1951 SSRC seminar of psychologists and linguists chose to designate as *Weltanschauung*”.

“Metalinguistics”, according to Smith, states the relations between the language and any other cultural system. “... in metalinguistics one deals with meaning ...”. “Metalinguistics is the consideration of the style and meaning of the microlinguistic system itself” (‘microlinguistics’ deals with the analysis of linguistic systems). (See for the further discussion on the meaning of the word: Jakobson, Chapter II, *Results*, p. 28).

²⁾ See for the term *semiotic* p. 54 of the present.

content). The content side of the style is precisely what is expressed (what is meant) by the choice of *these* words: by this kind of denotative language in so far as its content exceeds or "supergrades" the content of the denotative language itself. An example may help to make this clear: If in a poem or in literary prose there is a description of, for instance, a fine day in spring, and if it mentions, e.g., "the smiling sun", the word "smiling" (expression *and* content) used in this connection conveys a definite impression. Therefore "smiling", both its expression and its content, is as a whole the *expression* of a certain *content*: that which the poet wants to convey by using "smiling" instead of, e.g., "bright". Here we have to do with what Hjelmslev calls a *connotative semiotic*: a semiotic whose *expression* plane is provided by the content plane and expression plane of an ordinary (I might say an "uncoloured") language (i.e. a "denotative semiotic").

As to *metasemiotics*, treating of language or languages in a language (a semiotic) is called by Hjelmslev a *metasemiotic*. Thus ordinary grammar, for instance, is a *metasemiotic*. What is said in this grammar about language is, in this case, the expression plane of the *metasemiotic*. The content plane *and* expression plane of language or of the languages about which this grammar speaks provide the content plane of this *metasemiotic*. So a *metasemiotic* might be said to be the opposite of a *connotative semiotic*: whereas a *connotative semiotic* is described by OSG as "a semiotic whose expression-plane is a semiotic", a *metasemiotic* is defined as a semiotic "whose content-plane is a semiotic" (OSG p. 101): it is "a semiotic that treats of a semiotic" (OSG p. 105). "Such a *metasemiotic* linguistics itself must be" (*ibid*) ¹).

Of course we may go one step further and treat of a *metasemiotic*, of *glossematics*, for instance. The present study is actually

¹) That the distinctions are not so easily to be drawn in practice as it would seem from OSG's treatment of the matter, appears from Garvin's example. Garvin remarks that in the Morse code 'dot' and 'dash' could be considered *figurae* of the entire signs, which would make the two planes non-conformal and the Morse code a semiotic whose content plane is a semiotic (the letters of the alphabet) (*Review OSG* p. 93). This would make it into a *metasemiotic*. This would indicate a logical contradiction in Hjelmslev's theory, for the Morse code would also be a non-scientific semiotic, so a *connotative semiotic*. (A non-scientific semiotic is "a semiotic that is not an operation" (OSG p. 106), an operation being: "a description that is in agreement with the empirical principle" (OSG Def. 6)). In this connection also Haugen speaks of "startling conclusions" (*Review OSG*, IJAL, 20, no. 3, 1954, p. 250).

a “meta-metasemiotic”: a semiotic whose content is a metasemiotic, in other words: a semiotic whose content is a semiotic whose content is a semiotic.

The word Hjelmslev actually uses for it is different because he defines a metasemiotic as a *scientific semiotic*: what would be a meta-metasemiotic he calls “*meta-(scientific semiotic)*” (OSG p. 106), the parentheses denoting that *meta-* belongs to the whole compound that follows.

Parallel to this “meta-metasemiotic” runs the *meta-(connotative semiotic)*, for which Hjelmslev has again another term. Such a meta-(connotative semiotic) is *semiology*, says Hjelmslev. But he goes another step further and mentions also *metasemiology*, which, translated into the terms first used, would be a *meta-meta-(connotative semiotic)*. And this metasemiology is, says Hjelmslev, “in practice identical with the so-called description of substance” (OSG p. 109).

This “jump” to the *substance* is not strange in view of what has been said above on this point (p. 130), but the jump is strange indeed in view of Hjelmslev’s persistent refusal to admit the study of the substance to the domain of linguistics. When the reader takes his time over this chapter in OSG, however, several days of patient study may enable him to understand how such a thing as the “description of substance” can suddenly spring forth out of that terminological maze.

All this seems a rather intricate manner of considering quite common things. In Hjelmslev’s own eyes, however, the importance of this chapter evidently does not lie in the many theoretical distinctions and terms introduced, but in the broadening of the horizon of linguistic theory. The ultimate scope of OSG accounts for the unusual wording of the “common things”: Hjelmslev wishes to put linguistics in the central place in the system of all sciences. The introduction of the concepts of connotative semiotics and metasemiotics etc. gives us, in Hjelmslev’s opinion, “new means in hand for carrying further the analysis which from the point of view of semiology was exhausted. This can only mean that the ultimate variants of a language are subjected to a further, particular analysis on a completely physical basis. *In other words, metasemiology is in practice identical*

with the so-called description of substance". (OSG p. 109) ... "Thus all those entities which in the first instance, with the pure consideration of the schema of the object semiotic, had to be provisionally eliminated as non-semiotic elements, are re-introduced as necessary components into semiotic structures of a higher order. Accordingly, we find no non-semiotics that are not components of semiotics, and, in the final instance, no object that is not illuminated from the key position of linguistic theory. Semiotic structure is revealed as a stand from which all scientific objects may be viewed" (OSG p. 111). And ... "in a higher sense than in linguistics till now, language has again become a key-position in knowledge" (OSG p. 112).

It is Hjelmslev's desire to secure for language this key-position, and, at least in the terminological structure of OSG, he seems to succeed in doing so.

2. *Language and non-language.*

In the second part of Chapter 21 OSG, "*Language and Non-language*", we find discoveries that are very important contributions to the theory of language.

If in Ch. 20 the similarity in structure of the two planes, expression and content, is emphasized, Ch. 21 stresses their difference in structure. The very reason why we operate with two planes at all instead of with one is the fact that in natural language evidently "the two planes, when they are tentatively set up, *cannot be shown to have the same structure throughout*, with a one-to-one relation between the functives of the one plane and the functives of the other" (OSG p. 99). This shows at once that the *difference* between the two planes lies in their *functives*, in the *members* of their categories, whereas their *similarity* is in their *categories* themselves.

It would not have been necessary, perhaps, to speak about this interplay of similarity and difference if Hjelmslev's wording had not given rise to difficulties in more than one place. Therefore: when Hjelmslev stresses the similarity, the symmetry of the two planes, he means only the categorical symmetry between constituents and exponents and nothing else. For in his theory the difference between the planes is of much more importance: it enables Hjelmslev to define language by means of this difference.

We know that the idea of the two planes in language comes from Ferdinand de Saussure. Also from de Saussure is the idea that language is *form*: "les éléments des deux ordres se combinent; *cette combinaison produit une forme ...*" (*Cours* p. 157).

I have already had occasion to draw attention to de Saussure's straight lines in his scheme: on p. 149 I pointed out that the *form* of a word in the content plane was different from its *form* in the expression plane, and that to the smallest elements in the expression plane (phonemes) there corresponds nothing in the content plane. In spite of his analyzing *both* planes into 'figurae', Hjelmslev has not been blind to the difference in structure between the two planes and has drawn from it the conclusion that the linguist will consequently have to reckon with *two* different forms: the *form of the content* and the *form of the expression*. If there were complete one-to-one correspondence between the forms of the units in the two planes, as there is with games, it would be sufficient to describe their form in one plane only — it would even be unnecessary to reckon with two planes at all ¹⁾.

De Saussure has not drawn this conclusion. Miss Fischer-Jørgensen thinks this may be due to the fact that "he emphasizes the function between expression and content, and the paradigmatic function between elements in the system which can be derived from this function" at the cost of the syntagmatic function. When doing so, she believes it possible "to get along with a single form" ²⁾. This would perhaps be true if de Saussure had only distinguished morphemes and radical elements as the smallest units in the expression. But seeing that he recognizes phonemes, I do not see how he could have got along with a single form. Moreover, that he did realize the difference between

¹⁾ Instead of viewing *form* as form *within* the substance, both in the expression and in the content plane, Uldall views expression and content as each composed of two strata: form and substance; hence he speaks of "the four parts" of language (*Outline* p. 26), and of the "text consisting of four strata". Hence a text must, according to him, "be described by means of four separate deductions and inductions ... i.e. operations must be carried out four times", as soon as, in the deduction, we have arrived at units of content, expression, form and substance which do not coincide: "The reason for describing a text as consisting of four strata is the purely formal one that the components of one stratum cannot be found by analysis of components of any of the others; the strata are, in other words, not mutually conform". (*Outline* p. 27). The four strata appear again in Hjelmslev's recent article "*La stratification du langage*".

²⁾ E. Fischer-Jørgensen, *Washington Lecture on Glossematics* p. 3.

the forms appears from his chapters “La valeur linguistique considérée dans son aspect conceptuel” and “La valeur linguistique considérée dans son aspect matériel” (*Cours* p. 158–166).

But we owe it to Hjelmslev to have explicitly established this feature of the two different forms requiring the operation with two planes as an essential — as the essential feature of a true semiotic over against other sign structures such as games. (OSG p. 100). For the latter kind of sign structures he therefore proposes another name: *symbolic systems* (OSG p. 100). It is true that in many of these symbolic systems the entities of expression are not “isomorphic” with their interpretation but arbitrary, yet there is this affinity between them and really isomorphic symbols “that neither permits the further analysis into *figurae* that is characteristic of signs” (OSG p. 101).

Already in Ch. 12 Hjelmslev emphasized as “an essential basic feature in the structure of any language” that it is not first and foremost a sign system, but a system of *figurae* that can be used to construct signs. And Ch. 21 shows the importance of this statement, for it is this analysis of the semiotic sign into *figurae*, the fact that the sign is constructed of a restricted number of non-signs, which necessitates the operation with two planes. And it is the necessity of the operation with two planes which distinguishes, as we saw, semiotics from non-semiotics. (OSG p. 101; see p. 218 above).

The non-conformity of the two planes suffices to differentiate natural language from games, as can be gathered from OSG p. 100. As regards the other semiotics, such as “the so-called symbolic systems of mathematics or logic”, on the pages 99, 100 and 101 Hjelmslev tackles the problem with some hesitation. It is easy to understand why: “the logistic conception of a semiotic as monoplanar” (OSG p. 100) does not meet with much resistance outside linguistic circles. Having convincingly established natural language as biplanar, Hjelmslev can agree with the monoplanar conception of mathematics or logic, or he can deny it for logic and mathematics as well as he does so for natural language. But Hjelmslev does neither: “We must leave it to the specialists in the various fields to decide whether or not, for example, the so-

called symbolic systems of mathematics or logic, or certain kinds of art, like music, are to be defined as semiotics from this point of view" (OSG p. 100).

Provided that logicians and mathematicians adhere to the monoplanar conception of their sciences, Hjelmslev has evidently defined natural language over against every other monoplanar semiotic and can leave it to the other scientists to find an appropriate name for their "semiotics".

But this would render the position of glossematics rather weak. Hjelmslev does not stop here, therefore, leaving it to the future to bring the decision, but he proceeds further to consolidate the position of linguistics.

Towards the end of p. 94 Hjelmslev gives a formal definition of a semiotic as "a hierarchy, any of whose segments admits of a further division into classes defined by mutual relation, so that any of these classes admits of a division into derivatives defined by mutual mutation" ¹⁾).

The properties enumerated in this definition are not those of language only but those of any sign system — any semiotic. And, but for the last word, the definition would be applicable not only to semiotics but to anything and everything: it is the term "mutation" that restricts its applicability to *sign*-systems. Language shares this definition with all other semiotics — just as it has shared so many of its definitions given before Hjelmslev with other semiotics. What distinguishes Hjelmslev's definition from those others is that Hjelmslev precisely *wants* it to imply all semiotics, and then sets himself to define the points of difference: "What place within the totality of these semiotic structures can be thought of as assigned to language"? (OSG p. 96). The points of difference, he says, concern only facts of *usage* (OSG p. 95). It will appear from what follows whether this is entirely true, and if there is no difference on more essential points.

The second definition of language, and of natural language this time, given in OSG is: "a paradigmatic whose paradigms are manifested by all purports" (OSG p. 97). This is the same as when Reichling says that "natural language enables us to speak about everything". But this way of defining natural language does not

¹⁾ *Mutation* is "a common term for commutation and permutation" (OSG p. 47).

seem to be very attractive to glossematics, for another, "practical" definition of language is suggested: "In practice, a language is a semiotic into which all other semiotics may be translated — both all other languages, and all other conceivable semiotic structures" (OSG p. 97).

It is with good reason that this "practical" definition is added: for to define language with the notion of *purport*, as the previous definition does, is to define it metasemiotically, since in glossematics the substance, and thus the purport, cannot be used to give a definition proper of language.

The "practical" definition has the advantage that it operates with an apparently linguistic notion, the notion of "translating". But the question is — apart from the fact that it leads Hjelmslev beyond his own domain into metalinguistics — whether he can prove, with the premisses he starts from in OSG, that this "translatability" really defines "natural language" conclusively. Perhaps it will be best to quote OSG in extenso on the matter: "This translatability rests on the fact that languages, and they alone, are in a position to form any purport whatsoever; in a language, and only in a language, we can 'work over the inexpressible until it is expressed' (Kierkegaard). It is this quality that makes a language usable as a language, capable of giving satisfaction in any situation. We cannot here investigate the basis of this remarkable quality; there is no doubt that it rests on a structural peculiarity, on which we might be able to cast better light if we knew more about the specific structure of non-linguistic semiotics. It is an all but obvious conclusion that the basis lies in the unlimited possibility of forming signs and the very free rules for forming units of great extension (sentences and the like) which are true of any language and which, on the other hand, make it possible for a language to allow false, inconsistent, imprecise, ugly, and unethical formulations as well as true, consistent, precise, beautiful, and ethical formulations. The grammatical rules of a language are independent of any scale of values, logical, aesthetic, or ethical; and, in general, a language is independent of any specific purpose". (OSG p. 97).

Four peculiarities mentioned by Hjelmslev as the *basis of the translatability* of language are highly interesting:

a. "The unlimited possibility of forming signs", which, as was

seen before, rests on the use of a very limited number of expression-figurae which can be used over and over again. (OSG p. 43).

b) "The very free rules for forming units of great extension (sentences and the like) which are true of any language".

c. The fact that these rules are "independent of any scale of values, logical, aesthetic, or ethical": we can make false, inconsistent and unethical statements in formulations that are perfect from a linguistic point of view.

d. The fact that "a language is independent of any specific purpose".

We shall consider these points one by one and see to what extent they, as bases of the translatability, which is said to be unique to language, can be considered as features which distinguish language from any other semiotic.

a. The unlimited possibility of forming signs, which rests on the use of a limited number of figurae.

There is first of all the difficulty that it has not yet been adequately proved that the other semiotics mentioned on p. 100 OSG (mathematical systems, logic) are per se monoplanar and have no figurae. This is one reason why I have adduced the fact of the figurae in the discussion of point *a*. There is another reason, however. As the basis of this unlimited possibility of forming signs, the existence of figurae is a fundamental factor in the structure of language, but the glossematic method to determine the value of this factor for natural language sees only one side of it: its value for the *simplicity* and *economy* of the language structure. "The greatest possible simplicity" and "the greatest possible economy", "the smallest possible inventories" are standing glossematic expressions. Yet, besides the various objections made to this "simplicity principle", there is another, far more fundamental objection to be made against it. We shall consider again, for a moment, the relation between the above-mentioned limited number of figurae and its unlimited possibility of forming signs.

It is clear that, if all combinations of elements that are theoretically possible, repetition included, were actually used, an inventory of, e.g., six figurae of any substance whatsoever, would be amply sufficient to form the word-signs of any language; the

signs would not even have to be very long. Let us imagine for a moment that, instead of with six, we worked with three figurae, a circle, a square, and a triangle. If \triangle meant "immediate", $\bigcirc\square\triangle$ "help", and $\bigcirc\triangle$ "required", we could send a telegram "immediate help required" and it would look like this: $\triangle|\bigcirc\square\triangle|$ $\bigcirc\triangle$, if we agreed to put a special symbol at the end of every "word-sign". This would be a kind of communication that resembles that of natural language, it would only work with fewer figurae: it would be *simpler* and *more economical*

But still, in spite of its greater economy: would it be satisfactory? For one thing: would it be easy to follow, would it be easy to use? It is true, it has "easy" words: words of only very few different figurae — in ordinary language there are many words with three times as many different figurae and twice as long as the ones given above. And yet this ordinary (natural) language with its many long words would be easier to use and to follow than this other semiotic which would be so simply and economically constructed. *Why?*

Because the simplicity and economy of the latter are too great. Its shortcomings are precisely in its *simplicity* and its *economy*: it has *no more figurae than strictly necessary* to form the number of signs it needs ¹⁾ whereas any language has about three times as many as it would strictly speaking need to form its word-signs. It would be very difficult to "work over the inexpressible until it is expressed" (OSG p. 97) with a language system of the greatest possible simplicity. If a language were constructed on a system like the above, with three figurae, or on a system as Hjelmslev puts up for Danish, I doubt if anybody could follow it. The factor of the existence of figurae requires a valuation other than it receives in glossematics: assuming for the moment that there must be a certain "optimum" in language, we must not expect to find this optimum in the greatest possible simplicity, in the most economical use of elements; it is, on the contrary, to be expected that a certain *profusion of figurae* and probably of other elements, too ²⁾, will appear to be an essential feature of this "optimum".

¹⁾ If, of course, the factor of "repetition" is not carried *ad absurdum*, for then we could, as Eli Fischer Jørgensen observed, work with *one* figura.

²⁾ Cf. for instance, the great number of "declinations" of the noun in some languages; the existence of gender for nouns other than those denoting living beings; the existence of "strong" verbs side by side with weak ones, etc.

One result of this *profusion of figurae* is, for instance, that certain combinations of them can be reserved to occur only in certain positions in the word-sign, thus serving as indicators for either its beginning or its end, a feature that facilitates perception and recognition of speech.

That the difficulty of keeping apart this larger number of *figurae* in perception is less than in the case of the semiotic with the small number of units, is owing to the curious phenomenon that the features that constitute some of the linguistic *figurae* may reoccur in others, so that many of them can be arranged in a "two-dimensional system", which makes it easy to 'place' them: to keep them apart both in articulation and in perception ¹).

Of course the next question which is to be answered by linguistics is: where is the boundary between, so to say, "*dispensable*" and "*indispensable*" *profusion*? And when would the *profusion* be too great? In other words: is there a limit to the number of *figurae* which may not be surpassed in either direction by any language without detriment to its 'perceptibility', or rather its 'understandability'? Where is the minimum limit of the *profusion* that characterizes language? And where is its maximum limit?

It is here that glossematic theory is put to the test. Could it produce the answer to this fundamental question from its *calculus*? It could *not*: this question could only be answered by comparing *facts*. We know, and the calculation of possibilities of a semiotic with 6 or 7 *figurae* would prove it once more, that *theoretically* we could by a *calculation* find a probably great number of *realizable* language systems. But there is a great probability that many of them would never be found to be realized — not in the past, not now, not in the future. And it would remain for glossematics to answer the question *why those systems were not realized*. Unless it should content itself by referring the problem of the not realized systems to the realm of accident, glossematics, too, would be compelled to turn to *realized systems only* in order to find the general rules it would need to solve this problem. Glossematics, too, would have to base itself *exclusively on existing languages*,

¹) Cf. A. Martinet, *La double articulation linguistique*, Recherches p. 35, and R. Jakobson, *On the Identification of Phonemic Entities*, Recherches p. 208.

leaving aside the realizable systems as the interesting outcome, indeed, of an algebraic calculation, but as useless for linguistics.

b. The very free rules for forming units of great extension.

This is a property characteristic of language only in view of what was said under *a*. If not so viewed, it is a property of any “semiotic”: there are mathematical formulas which cover a whole page.

c. The fact that these rules are independent of any scale of values.

This, indeed, is a property which as far as I am able to see belongs to language and to language only. But there is one interesting feature in this peculiarity as mentioned in *glossematic* theory: it does not concern the form but the *substance*. We can make false, inconsistent and unethical statements in formulations that are perfect from a linguistic point of view — it is true. But the reverse is also true: we can make true, consistent and ethical statements in formulations which are awkward and imperfect from a linguistic point of view, for instance if we make them in a language that we have not yet mastered completely.

The point is that two standards are confused in this statement: the “scale of values” of the language as a language, of *how* we say something, and the “scale of values” of *what* we say: the scale of values of the *substance of content*. The first “scale of values” is the only one we can apply to language as a language, and language as a language is certainly not independent of that, as every student of a foreign language will know. Thus on this point too, language does not differ from any other semiotic.

But — it may be objected — it does not say that the language is independent of any scale of values but that its *rules* are. But even then there is no difference on the point between language and other semiotics and even symbolic systems: the “scale of values” of the rules for language, chess, and football is constituted by these very rules themselves.

d. The fact that language is independent of any purpose.

In a way this is true: the sentences of a language are not built up to attain, e.g., some final language construction as their ultimate end. In this respect a language is different from a

symbolic system such as a game, which, so to say, strives after some goal *inherent* in itself.

This independence of a purpose is an important feature marking off language from non-language, but in a way different from that meant in OSG: a language does have a purpose, but its purpose does not lie within itself, a language points outward, *its goal lies outside it*.

That is why it is only right in a way to say that language is independent of any purpose. Language *and every other semiotic* are independent of any purpose within themselves. But language and every other semiotic are dependent on a purpose outside themselves: they are to be *tools of communication*. Therefore this "independence of purpose" cannot be used by glossematics to mark a difference between language and other semiotics, as Hjelmslev has done: it marks off the difference between language and *symbolic system*.

Summary: of the four features which Hjelmslev considers characteristic of language only the first remains, but then understood in another sense than glossematic method deems necessary. It is true what Hjelmslev says about the "translatability" resting on the fact that languages ... are in a position to form any purport whatsoever" (OSG p. 97): "we cannot here investigate the basis of this remarkable quality". Glossematics leaves the problem unsolved ¹⁾.

This detracts nothing from the fact that, in the translatability and its basis that "languages and they alone, are in a position to form any purport whatsoever", Hjelmslev has given an entirely conclusive metalinguistic definition of natural language.

¹⁾ Reichling has worked out the basis of this remarkable quality in an article entitled *Taal als Verkeersmiddel* (Language as a Tool of Communication.) (Menselijke Verstandhoudingsmiddelen, 6e Symposion der Soc. v. Culturele Samenwerking, 1952, p. 76-85), and finds it in the immanent productivity which is inherent in the language system and which makes a language capable of producing any new sign by the means the language itself affords. It is in this characteristic precisely that language differs from every kind of semiotic or symbolic system.

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